



Eric.
SIP report for
Cornell-D
Nick

Report No.: 8003-306
Work Assignment No.: 038-2JZZ
Contract No.: 68-W9-0051
January 23, 1995
Rev. No.: 0
Volume 1 of 3

Mr. Joseph Hudek
Pre - Remedial WAM
U.S. Environmental Protection Agency
Region II - Environmental Services Division
Edison, NJ 08837

RE: Cornell Dubilier Electronics Inc. Site Inspection Prioritization Evaluation

Dear Mr. Hudek:

The following is a summary of the Site Inspection Prioritization evaluation of the Cornell Dubilier Electronics, Inc. site (CERCUS ID No. NJD981557879) (Ref. No. 1).

General Description and Site History

The Cornell Dubilier Electronics Inc. (CDEI) site is located on Hamilton Boulevard, south of the Conrail railroad tracks, in South Plainfield, Middlesex County, New Jersey. Refer to Figure 1 for the Site Location Map. The site is currently known as the Hamilton Industrial Park and is occupied by approximately 15 industries. The site is owned (1987 to present) by D.S.C. of Newark located on 70 Blanchard Street, Newark, New Jersey. The site has had several different ownerships during the period between 1964 - present. A Delaware based company, Marco Investing Corp., acquired ownership on November 30, 1976 from the firms of C.R.D. Realty Corporation (N.J. Corporation) and Lamitex, Inc. (N.J. Corporation). The addresses given with these two firms are the same as the location given for D.S.C. of Newark. C.R.D. and Lamitex acquired ownership from CDEI on June 13, 1961. CDEI acquired ownership from Dana Corporation Foundation on July 27, 1956. Although information regarding the site's tenants activities from 1964 to present is not available, names of some present tenants have been identified. The following tenants, currently operate at Hamilton Industrial Park: JRS Machine Shop, Pioneer Associates and Erectors (building 9A), Diversified Installations, Inc. (building 9A), Ultrasonic Powders, Inc. (building 10), Galaxy Steel Door and Frame (building 8), R & M Manufacturing, Columbia Products Inc., and Hope International (building 1) (Ref. No. 27).

CDEI tested transformer oils at the approximately 25-acre property for an unknown period of time until the company vacated the site in 1961. It was alleged that during CDEI's period of operation the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto site soils. Former employees have reportedly claimed that transformers were buried behind the facility during the same time period (Ref. Nos. 22, p. 3; 24). New Jersey Department of Environmental Protection (NJDEP) personnel visited the site on January 4, 1985 and noted that a portion of the lot located in the back of the facility was found to contain a black soil unnatural to the area (Ref. No. 22, pp. 4, 6). During a NJDEP Site Inspection on September 11, 1986, the black soil was still visible. In addition, four large black tanks were observed on the edge of a large filled-in area. The tanks were at the top of an embankment leading down to the on-site stream (Ref. No. 23).

NJDEP collected three soil, two surface water and two sediment samples as part of a September 11, 1986 Site Inspection (Ref. Nos. 21; 23). The Sample Location Map was not available. The exact sample locations are unknown. All of the chemical analyses for the Site Inspection (SI) were performed by a NJDEP Certified

Laboratory for Target Compound List (TCL) organic compounds and Target Analyte List (TAL) inorganic constituents and have undergone an organic review. A majority of the organic analytical data are Contract Laboratory Program (CLP) equivalent, however, the inorganic analytical data were not validated. Most of the organic data were qualified due to exceedances of holding times and other infractions (Ref. No. 21). The samples indicated the presence of numerous volatile organic compounds (VOCs), inorganic constituents, and PCBs in the site soils and sediment samples collected from the unnamed tributary to the Bound Brook. The soil and surface water samples designated as background by NJDEP exhibited many of the higher concentrations of hazardous substances (Ref. No. 21, pp. 1-2).

An on-site reconnaissance was conducted by USEPA on March 30, 1994. A large aboveground storage tank (contents unknown) was observed in the middle of the property. It was learned that a boiler system had leaked heating oil onto soil in the immediate vicinity of building no. 18. The soil was excavated and placed in two small piles in front of building no. 14. The four black tanks first observed by NJDEP in 1985 were again observed behind the former facility at the top of an embankment. The black soil reported by NJDEP to be present in this area was not visible during the on-site reconnaissance (Ref. No. 13).

The USEPA conducted a sampling site inspection on June 8, 1994 during which samples were collected from six surface soil, four surface water and four sediment sample locations (Ref. Nos. 14; 15; 16). Refer to Figure 2 for Sampling Location Map. The chemical analyses of all of the samples were performed by USEPA CLP laboratories for TCL organic compounds and TAL inorganic constituents using USEPA CLP protocols (Ref. Nos. 15; 16). Background sediment samples were collected from two additional sample locations by USEPA during a second round of sampling on October 13, 1994. Refer to Figure 3 for Sampling Location Map. These samples were also analyzed for TCL organic compounds and TAL inorganic constituents using USEPA CLP protocols (Ref. Nos. 17; 18; 19).

Evaluation of Existing Information

Information in the site file and analytical results from the two 1994 USEPA sampling events were used to conduct an initial evaluation of the site. The information in the site file indicated that the primary route of concern for contamination migration is via surface water.

The NJDEP collected three soil, two surface water, and two sediment samples on September 11, 1994 (Ref. Nos. 21; 23). The exact locations of the soil samples are unknown, but one of the samples was reported to be collected from an area which appeared to be a dumping site for capacitors, and another sample was designated as a background soil sample (Ref. Nos. 20; 21). However, the designated background soil sample exhibited many of the highest concentrations of hazardous substances detected during sampling (Ref. No. 21). The following hazardous substances were detected in the soil samples collected from the CDEI site during the NJDEP site inspection: antimony (30,500 $\mu\text{g/kg}$), arsenic (15,900 - 30,500 $\mu\text{g/kg}$), cadmium (3,200 - 55,300 $\mu\text{g/kg}$), chromium (15,100 - 242,000 $\mu\text{g/kg}$), copper (62,400 - 1,600,000 $\mu\text{g/kg}$), 1,1-dichloroethene, (38J - 88J $\mu\text{g/kg}$), diethylphthalate (900,000J $\mu\text{g/kg}$), lead (441,000 - 1,930,00 $\mu\text{g/kg}$), mercury (1,000 - 1,500 $\mu\text{g/kg}$), nickel (16,300 - 589,000 $\mu\text{g/kg}$), PCBs (190,000J - 680,000J $\mu\text{g/kg}$), silver (2,400 - 12,400 $\mu\text{g/kg}$), trichloroethene (35J - 79J $\mu\text{g/kg}$), and zinc (64,300 - 1,800,000 $\mu\text{g/kg}$). The J denotes data qualified as estimated. The inorganic data was never validated. High concentrations of similar contaminants were also detected in the sediment samples collected from the unnamed tributary of Bound Brook, which traverses the southeastern portion of the site. The upstream sediment sample exhibited generally higher concentrations of metals than the downstream sample. A PCB (Aroclor-1254) was detected at a significantly greater concentration (140,000 J $\mu\text{g/kg}$) in the downstream sediment sample compared to the upstream sample (25,000 $\mu\text{g/kg}$) (Ref. Nos. 21; 23).



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 6/4/84	SCALE: 1" = 2,000'
REPORT NUMBER: 6003-308	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

FIGURE 1

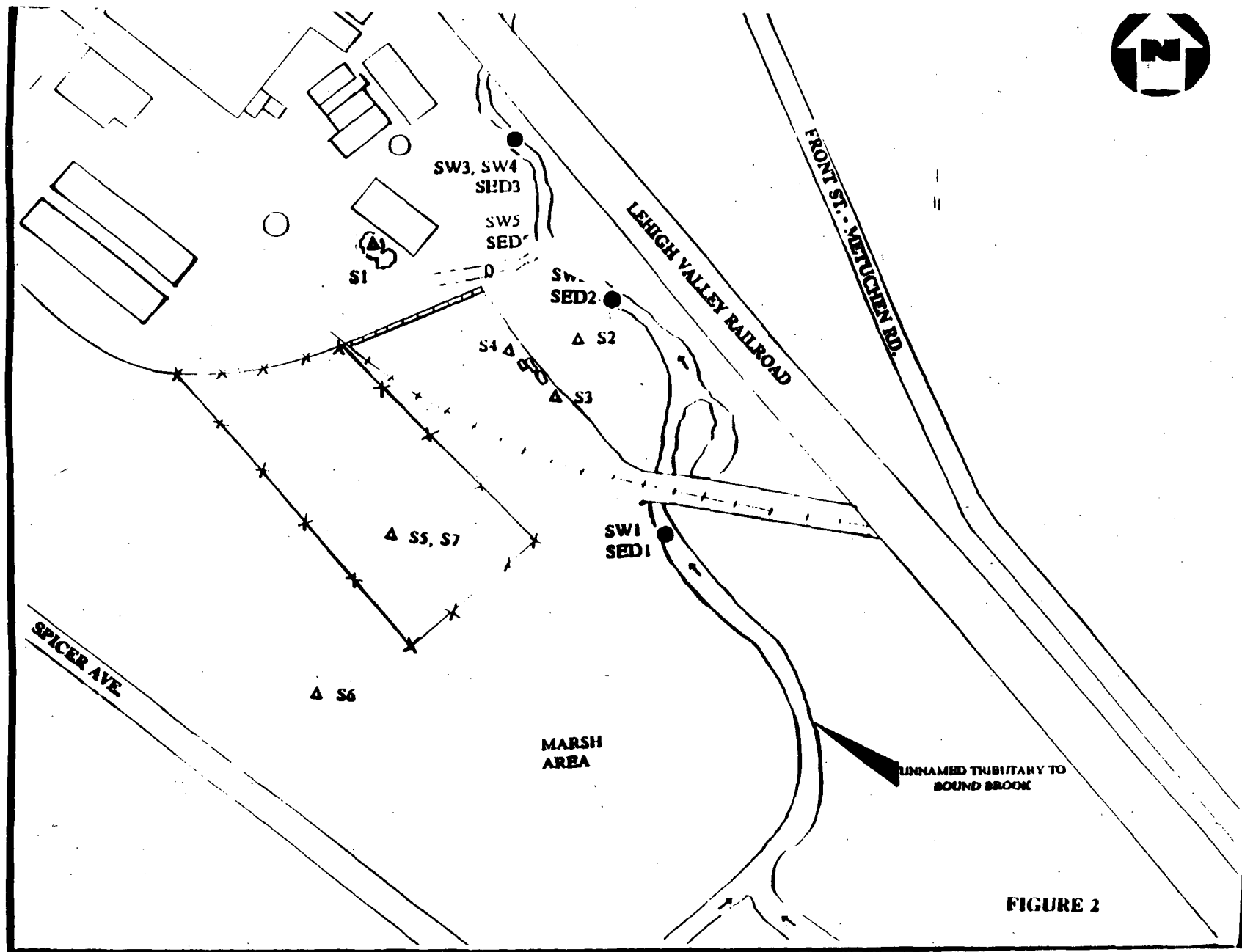


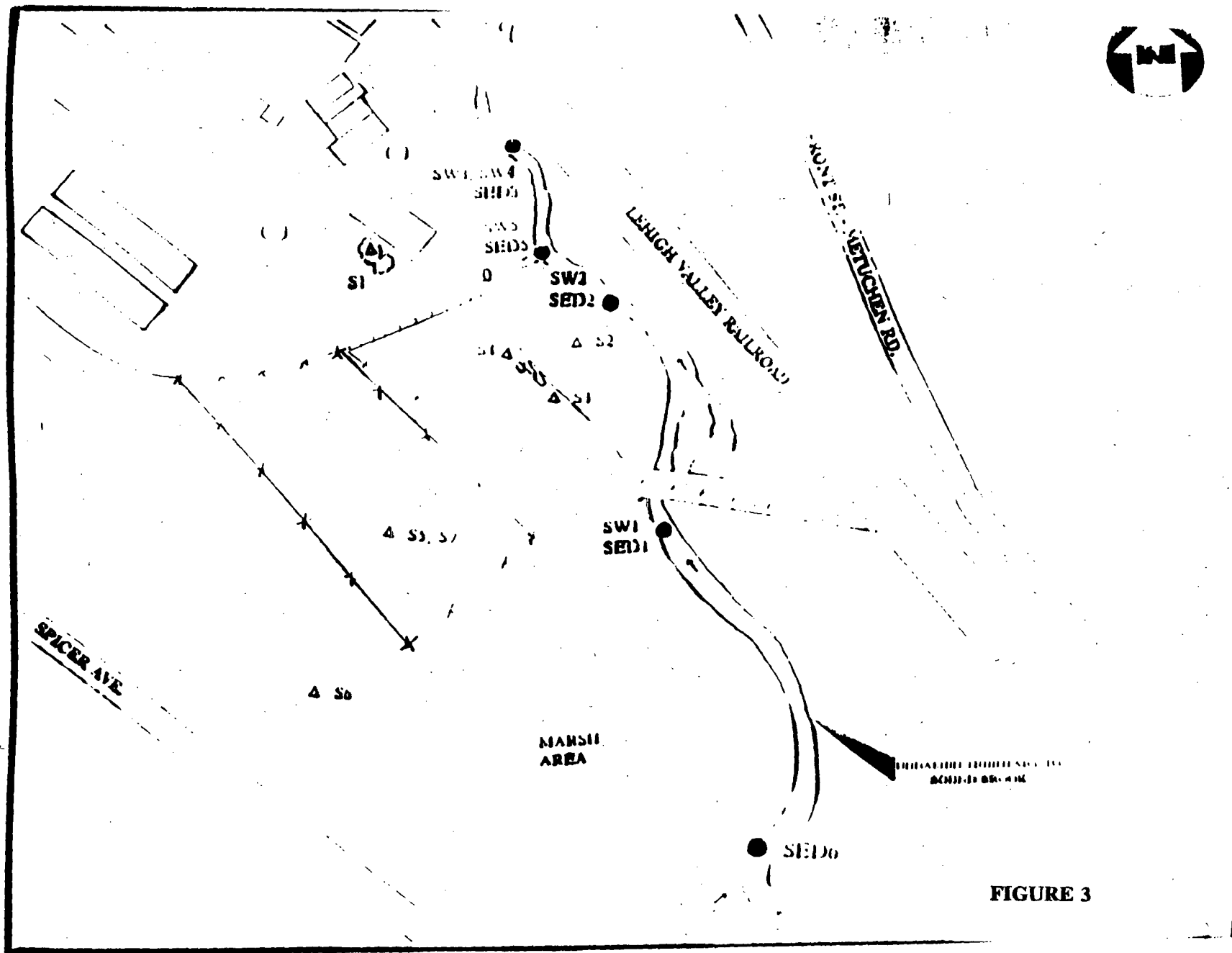
FIGURE 2

MAP KEY

SOIL SAMPLE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



MAP KEY

CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE

Soil, surface water and sediment samples were collected at the CDEI site by USEPA on June 8, 1994 (Ref. Nos. 14; 15). The results of the sample analyses indicated elevated concentrations of VOCs, semi-volatile organic compounds, PCB's and inorganic constituents in the site soils. An additional area of contamination was discovered within a fenced area on the back portion of the property. A soil sample collected within the fenced area exhibited the highest concentration of a PCB (Aroclor-1254 at 1,100,000 $\mu\text{g/kg}$) found in the site soils (Ref. Nos. 14; 15; 16). The fenced area, which was originally believed to be "clean", drains along the abandoned railroad track to the location of the designated background surface water/sediment sample (Ref. Nos. 2; 15). An observed release to surface water could not be documented as the designated background sediment sample was found to contain the highest concentration of a PCB (Aroclor-1254 at 550,000 micrograms/kilogram ($\mu\text{g/kg}$)) (Ref. No. 16, pp. 1-2, 176).

Background sediment samples were collected from two additional sample locations by USEPA during a second round of sampling conducted on October 13, 1994. These samples were also analyzed for TCL organic compounds and TAL inorganic constituents using USEPA CLP protocols (Ref. Nos. 17; 18; 19). The sample results were compared to the June 8, 1994 sampling event. An observed release to surface water of a PCB was documented based on the results of the October, 1994 analyses (Ref. Nos. 16; 19).

Hazard Assessment

Updated and additional information and data collected to further evaluate the site included groundwater population data, surface water population data, sensitive environment information, and 4-mile radius populations.

Groundwater Pathway - An observed release to groundwater cannot be documented as no groundwater sampling associated with the CDEI site has ever occurred. The CDEI site lies within the Piedmont physiographic province (Ref. No. 25, p. 18). The site is within the boundaries of the outwash plain, an area of about 16 square miles located between Metuchen, Plainfield and the town of Bound Brook. The outwash plain consists of layers of sand and gravel which together are designated stratified drift. The stratified drift is about 10 to 60 feet thick on its eastern edge and becomes finer and thinner to the west. Although the stratified drift is too thin and covers too small an area to be a sole source of water, it does hold water which percolates into the underlying Triassic rocks (Ref. No. 25, p. 12). Directly below the stratified drift is the bedrock of the Brunswick Formation which is made up largely of sandstone and conglomerate containing interbedded shale (Ref. No. 25, pp. 12, 15). The stratified drift and Brunswick Formation are hydraulically interconnected in the site vicinity, and together are utilized as a drinking water source in the site vicinity (Ref. Nos. 5; 25, pp. 12, 21-23). Groundwater flow direction in the unconfined aquifer follows the local topography and is to the north. Depth to groundwater at the site is less than 60 feet. The hydraulic conductivity of the stratified drift is estimated to be 10^{-4} centimeters per second (cm/sec) (Ref. Nos. 2; 26).

Groundwater is a significant source of drinking water within a four-mile radius of the site. The majority of people within four miles of the site are served drinking water from either the Middlesex Water Company or the Elizabethtown Water Company, both of which utilize supply wells within the target distance limit. The nearest well is located 0.6 mile North (downgradient) of the site (Ref. No. 2). Drinking water wells within four miles of the site serve an aggregate population of 80,299 within a four mile radius of the CDEI site (0 - 0.25 mile, 0, 0.25 - 0.5 mile, 0, 0.5 - 1 mile, 11,077, 1 - 2 miles, 33,464, 2 - 3 miles, 19,903, 3 - 4 miles, 15,855) (Ref. No. 5). The proximity of the site to a New Jersey State Wellhead Protection Area cannot be determined, pending promulgation by the NJDEP of protected areas (Ref. No. 11).

Surface Water Pathway - An unnamed tributary of the Bound Brook (11 cubic feet per second (cfs)) traverses the southeast corner of the site property. The unnamed tributary flows into the Bound Brook 4,000 feet downstream of the probable point of entry. The Bound Brook flows for 1.5 miles before emptying into New Market Pond. The Bound Brook continues to flow from New Market Pond and empties into the Green Brook (30 cfs) at a point located approximately 6.2 miles from the site's probable point of entry. From its confluence with the Bound Brook, the Green Brook flows for 2.5 miles before discharging into the Raritan River (1,340 cfs). The Raritan River accounts for the remaining 6.3 miles of the surface water pathway to the target distance limit (Ref. No. 6).

Two surface water/sediment samples were collected during NJDEP's 1986 SI. The exact locations of the samples are unknown. PCBs and inorganic constituents similar to those found in the site soils were detected in both sediment samples at elevated concentrations. However, the data quality associated with the inorganic analyses is unknown, and the data quality pertaining to the organic analyses is inadequate for this evaluation (Ref. No. 21).

Surface water and sediment samples were collected by USEPA on June 8, 1994. No observed release to surface water could be documented based on the analytical results from this sampling event (Ref. Nos. 14; 15; 16). However, it was determined that the designated background sample location (SED1) contained the highest concentration of a PCB (Aroclor-1254 at 550,000 $\mu\text{g/kg}$) when compared to the downstream sediment samples that were collected (Ref. No. 16, pp. 1-2, 176). It was inferred from the results of the soil sample analyses from the same sampling event, that the designated background sediment sample location is actually the probable point of entry for storm water runoff draining an area previously believed to be unaffected by site activities (Ref. Nos. 14; 15; 16). Sediment samples were collected from two additional background locations by USEPA on October 13, 1994 (Ref. Nos. 17; 18; 19). Analytical results from this sampling event were compared to the June 1994 event. An observed release of a PCB (Aroclor-1254 at 550,000 $\mu\text{g/kg}$) to the surface water pathway was established based on the two sampling events (Ref. Nos. 16; 19).

There are no surface water lakes located within the target distance limit for the surface water pathway; however, the State of New Jersey has designated all of the abovementioned streams for public potable water supply use after such treatment as required by law or regulation (Ref. Nos. 8; 9). In addition, these water bodies are utilized as freshwater fisheries (Ref. No. 10). Based on analytical data from the two 1994 USEPA sampling events, actual contamination of 0.1 mile of wetlands frontage is documented (Ref. Nos. 2; 3; 14; 15; 16; 17; 18; 19). The unnamed tributary to the Bound Brook, the Bound Brook, New Market Pond, and the Green Brook contain a total of 7.27 miles of wetland frontage, while the Raritan River contains 4.80 miles of wetland frontage within the target distance limit (Ref. Nos. 3; 6). All of the abovementioned water bodies are designated by the State of New Jersey for the maintenance, migration and propagation of the natural and established biota (Ref. No. 9). Habitats for four New Jersey State endangered species were identified near the Bound Brook. No other sensitive environments have been identified along any of the water bodies within the target distance limit (Ref. No. 12).

Soil Exposure Pathway - Soil samples were collected from six locations during the June 1994 USEPA sampling event. Analysis of the soil samples detected the following hazardous substances at elevated concentrations: anthracene (380 $\mu\text{g/kg}$), arsenic (25.7 mg/kg), benzo(a)anthracene (1,800 $\mu\text{g/kg}$), benzo(a)pyrene (1,900 $\mu\text{g/kg}$), benzo(b)fluoranthene (2,500 $\mu\text{g/kg}$), benzo(g,h,i)perylene (1,100 $\mu\text{g/kg}$), benzo(k)fluoranthene (1,600 $\mu\text{g/kg}$), cadmium (36.7 mg/kg), chromium (78.6 mg/kg), chrysene (2,300 $\mu\text{g/kg}$), dibenz(a,h)anthracene (460 $\mu\text{g/kg}$), 1,2-dichloroethene (19E $\mu\text{g/kg}$), fluoranthene (5,000 $\mu\text{g/kg}$), indeno(1,2,3-cd)pyrene (1,400 $\mu\text{g/kg}$), lead (2,200 mg/kg),

mercury (2.9 mg/kg), phenanthrene (2,200 $\mu\text{g/kg}$), pyrene (2,900 $\mu\text{g/kg}$), PCBs (Aroclor-1254 @ 1,100,000 $\mu\text{g/kg}$), silver (26.7 mg/kg), and trichloroethene (82E $\mu\text{g/kg}$) (Ref. Nos. 14-16).

The site is not fenced and there is no apparent public recreational use for the land. Several homes are within 200 feet of the site boundary; however, no residences are located within 200 feet of any areas of observed contamination (Ref. No. 2). It is estimated that between 10 and 100 workers are employed at the Hamilton Industrial Park, but less than 10 are believed to be within 200 feet of surficial soil contamination. Building No. 14, which is occupied by the JRS Machine Company is the only structure within 200 feet of an area of observed contamination (Ref. Nos. 2; 13, pp. 7, 11; 15). No day care centers, schools, or terrestrial sensitive environments have been identified on or within 200 feet of the site (Ref. Nos. 2; 12).

Air Pathway - There is no documentation to establish whether a release of contaminants to the air has occurred. Approximately 183,276 individuals reside within a four mile radius of the site (0 - 0.25 mile, 541; 0.25 - 0.5 mile, 1,738; 0.5 - 1 mile, 6,409; 1 - 2 miles, 29,518; 2 - 3 miles, 62,681; 3 - 4 miles, 82,389) (Ref. No. 4). There are approximately 34 acres of wetlands within 0.5 mile of the site (Ref. No. 3). There are eight known state or federal threatened/endangered species which have been identified between 0.5 and 4 miles from the site (Ref. No. 12).

Summary

Based on information contained in the site files and additional information collected, the following conclusions were drawn. Transformer oils were tested at the Cornell Dubiller Electronics, Inc. site for an unknown period of time until the company vacated the site in 1961. The NJDEP received reports that transformers and transformer oil were dumped on the back portion of the site property. Environmental sampling completed by the NJDEP in 1986 and the USEPA in 1994 confirmed the presence of elevated concentrations of hazardous substances. PCBs were detected in the site soils and sediments of the unnamed tributary of the Bound Brook, which traverses the southeastern portion of the site property. More than 0.1 miles of wetlands frontage was documented as being contaminated with PCBs based on the 1994 USEPA sampling event. Past operations conducted at CDEI are attributable to the site, but, there is a possibility that CDEI may not be the only potentially responsible party using PCB processes. Industrial activity has continued at the site since the closing of CDEI in the 1960's. A list of tenants who have conducted activity at the site since 1964 is not available, but some of the current tenants are listed in this report. It is possible some of the past and present tenants have also used PCBs in their operations. The unnamed tributary to the Bound Brook is designated for the maintenance, migration and propagation of the natural and established biota. Groundwater at the site has never been sampled although groundwater wells within four miles of the site provide potable water to approximately 80,299 people. Several businesses are currently operating at the Hamilton Industrial Park, only one of the buildings on the property is located within 200 feet of an area of observed surficial soil contamination. No residences, schools, day care facilities, or terrestrial sensitive environments are located on or within 200 feet of areas of surficial soil contamination. Finally, a release to air from the site has not been documented.

Very truly yours,

ANDREW CUBANOFF
SITE MANAGER

STEVEN T. McNULTY
TASK LEADER

JOHN L. SPENDORE, P.E.
WORK ASSIGNMENT MANAGER

**This Report was conducted
under the following
USEPA Documentation Procedure**

**Guidance for Performing Site
Inspections Under CERCLA
Interim Final Publication 9345.1-05**

ATTACHMENT 1

EXHIBIT A

PHOTOGRAPH LOG

**CORNELL OUBUIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY**

ON-SITE RECONNAISSANCE

March 30, 1994

PHOTOGRAPH LOG
Cornell Dutilier Electronics, Inc.
South Plainfield, NJ

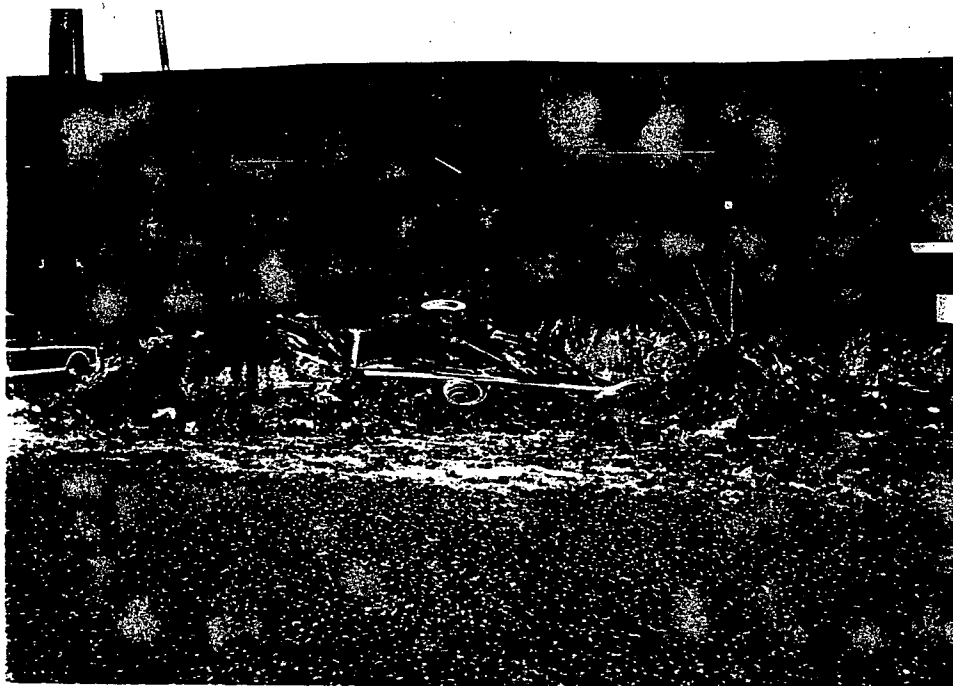
March 30, 1994

All photographs taken by Andrew Cilbanoff on 3/30/94.

<u>Photo No.</u>	<u>Description</u>	<u>Time</u>
1P & 1S	Picture of contaminated soil pile outside of building No. 14.	1115
2P & 2S	Picture of backlot.	1120
3P & 3S	Picture of 4 tanks located at top bank of Bound Brook.	1122
4P & 4S	Picture of 5th tank (East of other 4).	1123
5P & 5S	Picture of Hamilton Industrial Park Building Nos. 14, 15, 16, 18	1300
6P & 6S	Picture of above ground storage tank between building Nos. 9, 10, 11.	1300
7P & 7S	Picture of Bound Brook upstream of railroad tracks.	1334
8P & 8S	Picture of Bound Brook downstream of railroad tracks.	1335
9P & 9S	Picture of field with buildings in backyard (taken from back of lot).	1339
10P & 10S	Picture of tank on bank of Bound Brook.	1341
11P & 11S	Picture of tanks taken from probable point of entry.	1349

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

8003-306



1P & 1S

Picture of contaminated soil pile outside of building No. 14.

1115



2P & 2S

Picture of backlot.

1120

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

8003-306



3P & 3S

Picture of 4 tanks located at top bank of Bound Brook.

1122



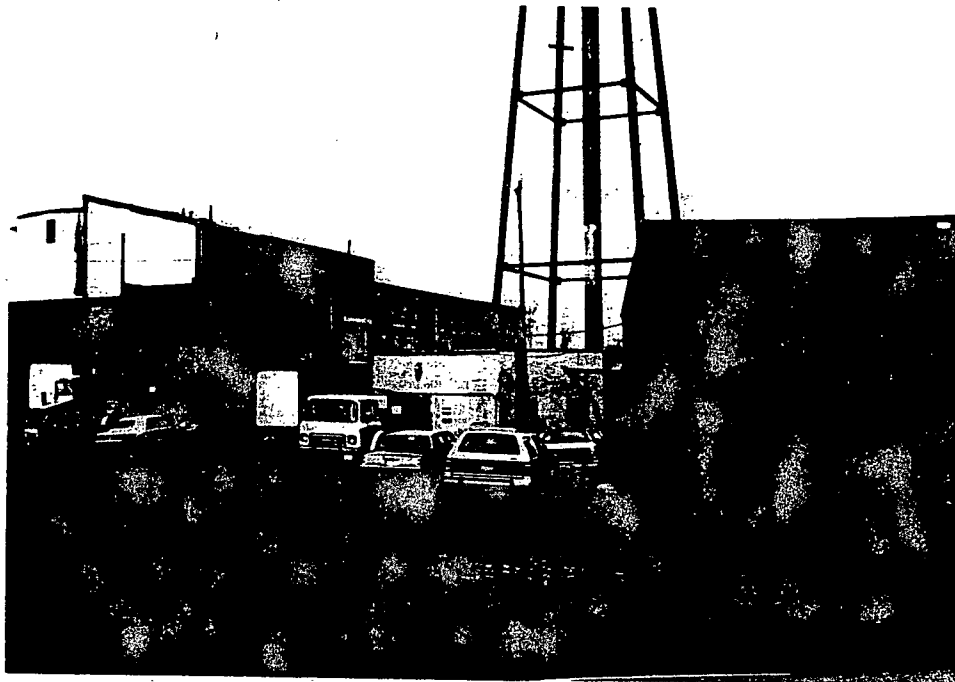
4P & 4S

Picture of 5th tank (East of other 4).

1123

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

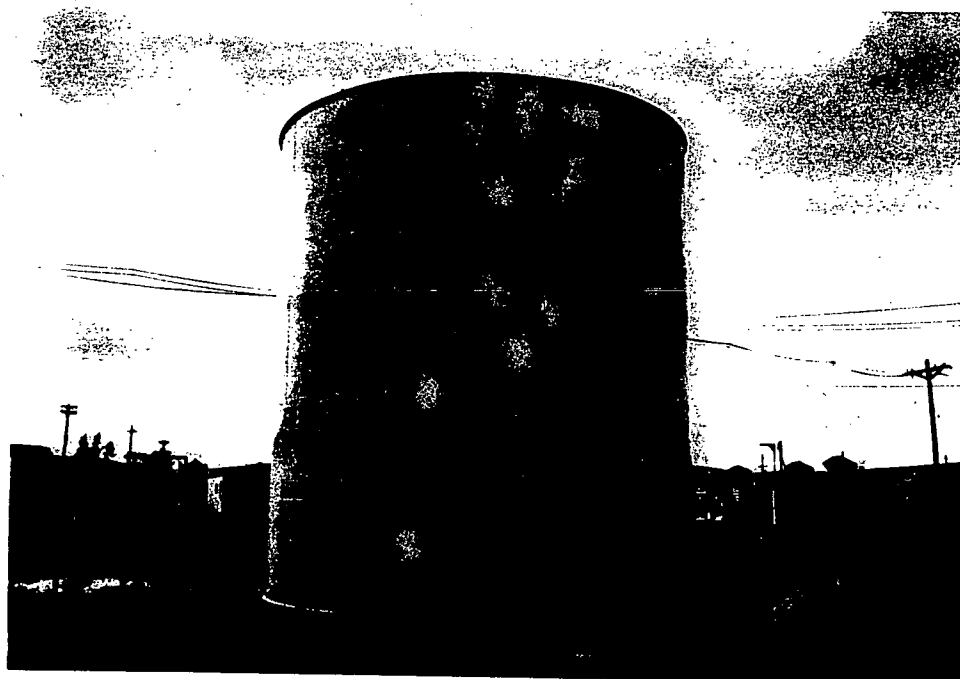
8003-306



5P & 5S

Picture of Hamilton Industrial Park Building Nos. 14, 15, 16, 18.

1300



6P & 6S

Picture of above ground storage tank between building Nos. 9, 10, 11.

1300

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

8003-306



7P & 7S

Picture of Bound Brook upstream of railroad tracks.

1334



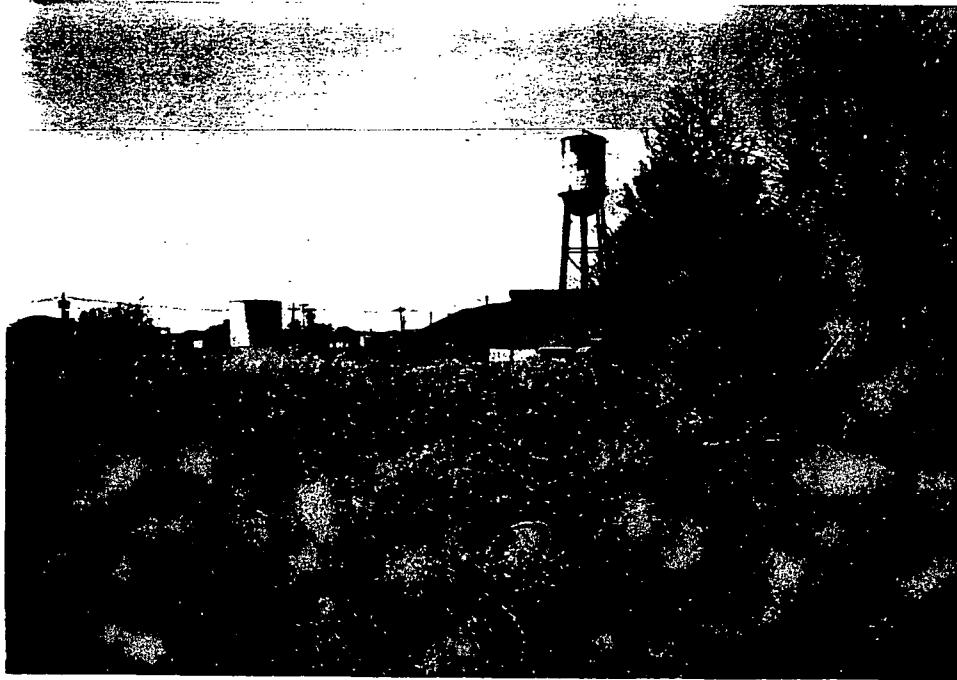
8P & 8S

Picture of Bound Brook downstream of railroad tracks.

1335

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

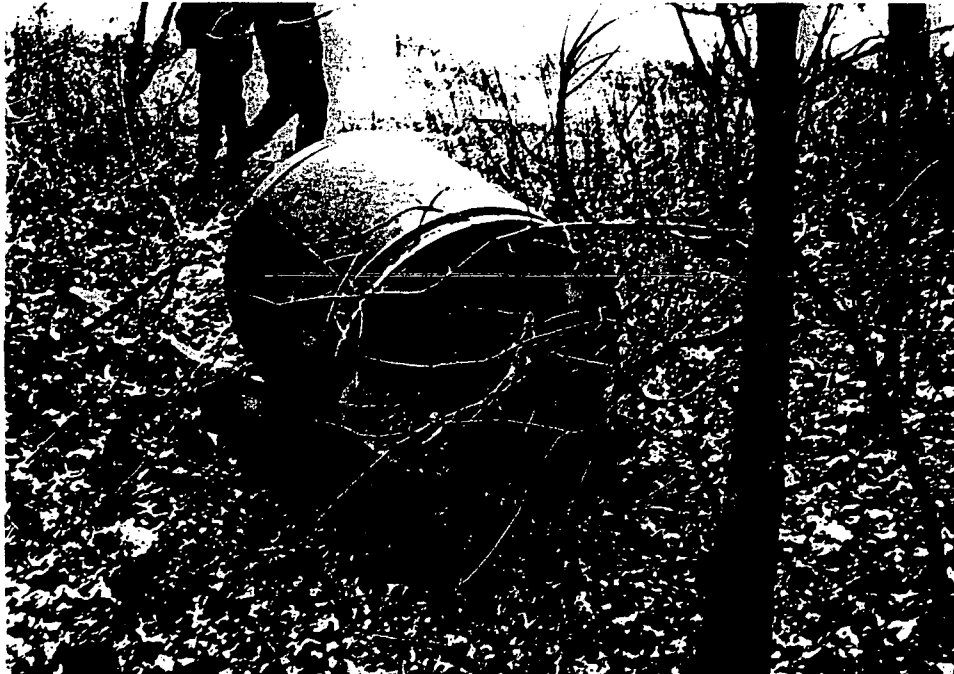
8003-306



9P & 9S

Picture of field with buildings in backyard (taken from back of lot).

1339



10P & 10S

Picture of tank on bank of Bound Brook.

1341

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

8003-306



11P & 11S

Picture of tanks taken from probable point of entry.

1349

ATTACHMENT 2

EXHIBIT B

PHOTOGRAPH LOG

**CORNELL OUBUJER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY**

**SITE INSPECTION PRIORITIZATION
SAMPLING EVENT**

June 8, 1994

PHOTOGRAPH LOG
Cornell Dubbler Electronics, Inc.
South Plainfield, NJ

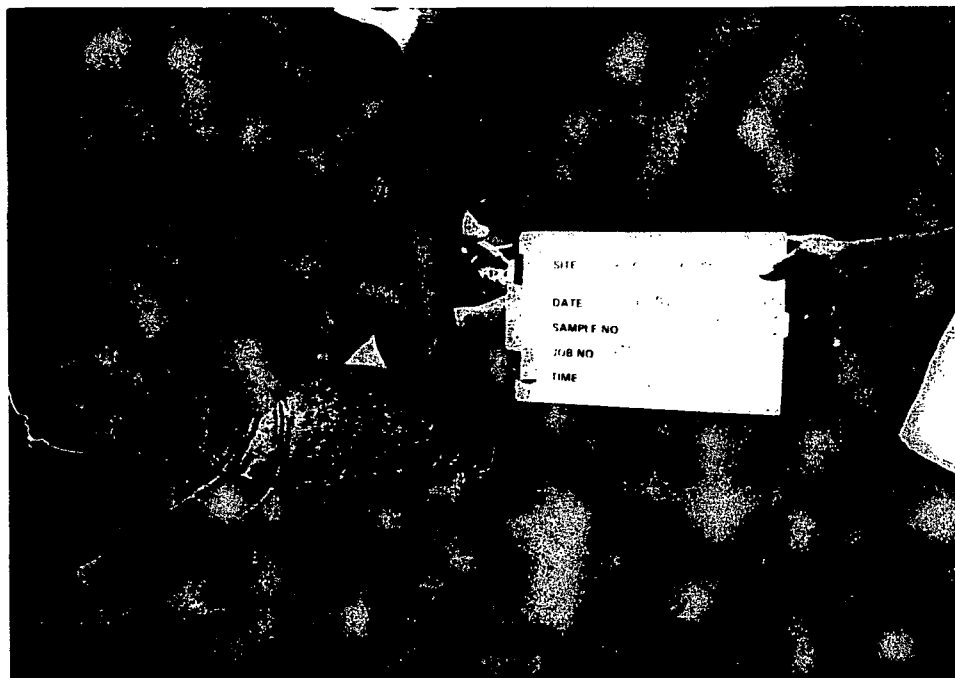
June 8, 1994

All photographs taken by Gary Bielen on 6/8/94.

<u>Photo No.</u>	<u>Description</u>	<u>Time</u>
1P & 1S	Picture of C. Bath collecting S1.	1035
2P & 2S	Picture of C. Bath collecting S4.	1052
3P & 3S	Picture of C. Dwyer collecting S3.	1110
4P & 4S	Picture of C. Dwyer collecting S2.	1125
5P & 5S	Picture of C. Bath collecting S5.	1200
6P & 6S	Picture of C. Dwyer collecting S6.	1220
7P & 7S	Picture of D. Kahlenberg collecting SW3.	1505
8P & 8S	Picture of D. Kahlenberg collecting SW4.	1510
9P & 9S	Picture of D. Kahlenberg collecting SED3.	1515
10P & 10S	Picture of effluent pipe stream convergence with unnamed tributary SW5/SED5.	1535
11P & 11S	Picture of effluent pipe.	1555
12P & 12S	Picture of D. KaNenberg collecting SW2/SED2.	1615
13P & 13S	Picture of D. Kahlenberg collecting SW1/SED1 MS/MSD.	1645
14P & 14S	Picture of submerged 55 gallon drum.	1705

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

8003-306



1P & 1S

Picture of C. Bath collecting S1.

10S5



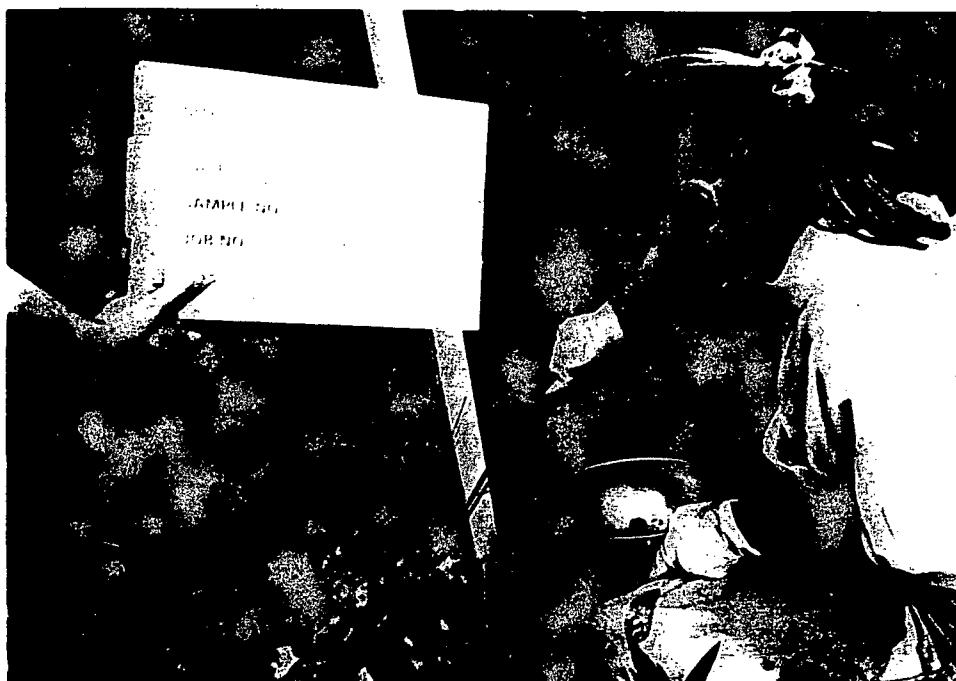
2P & 2S

Picture of C. Bath collecting S4.

1052

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

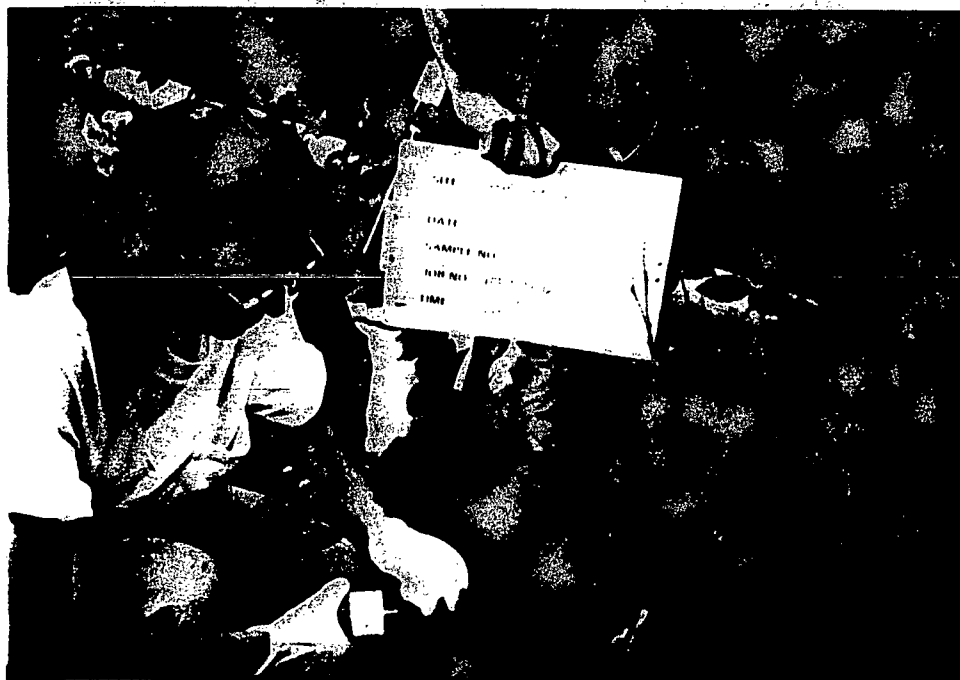
8003-306



3P & 3S

Picture of C. Dwyer collecting SS.

1110



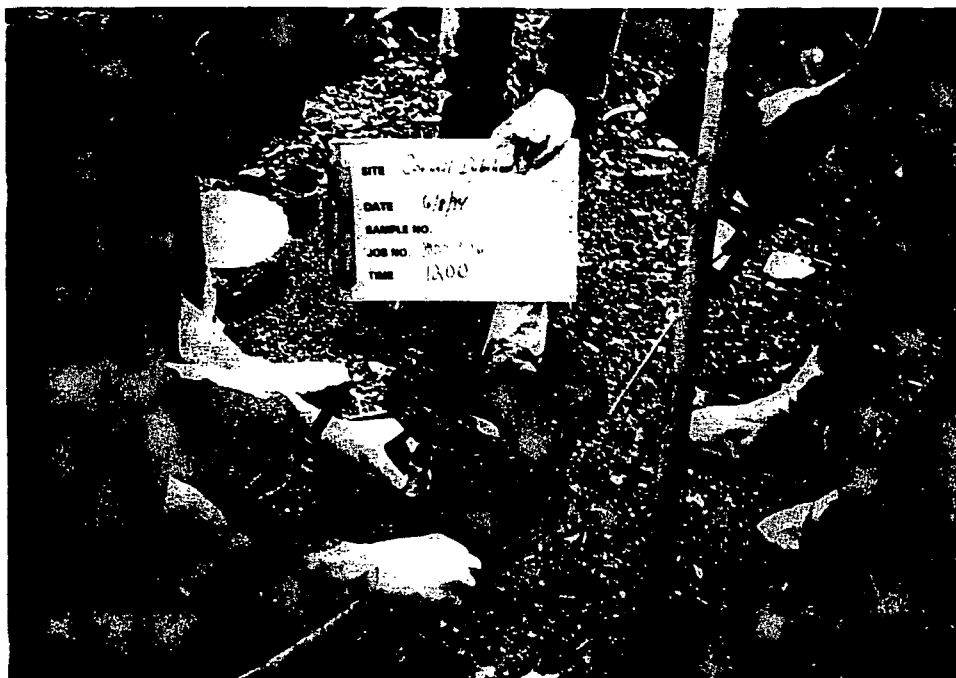
4P & 4S

Picture of C. Dwyer collecting S2.

1125

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

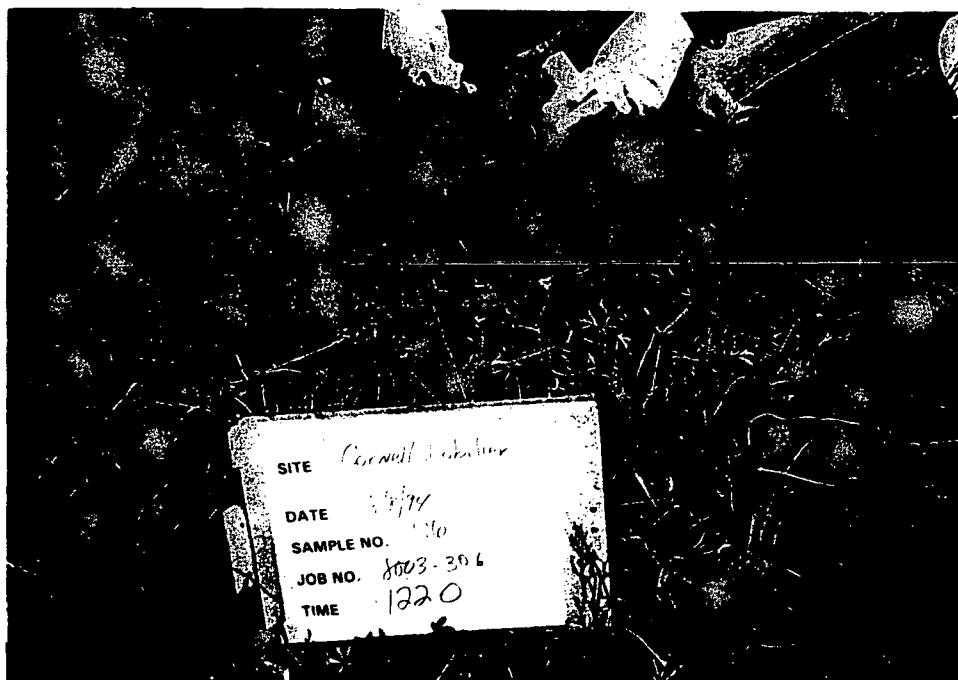
8003-306



5P & 5S

Picture of C. Bath collecting S5.

1200



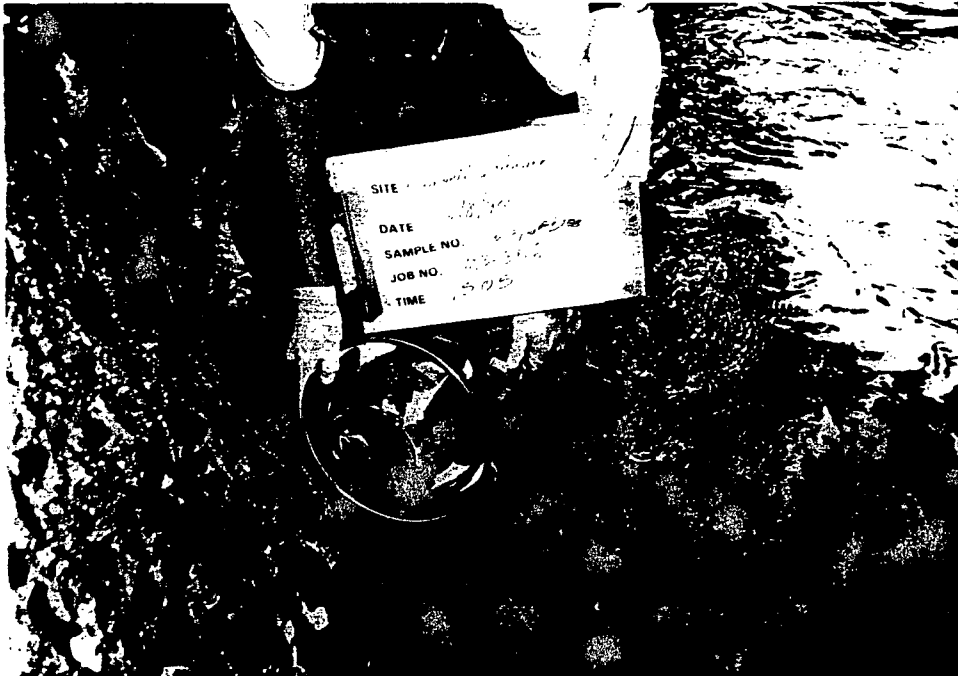
6P & 6S

Picture of C. Dwyer collecting S6.

1220

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

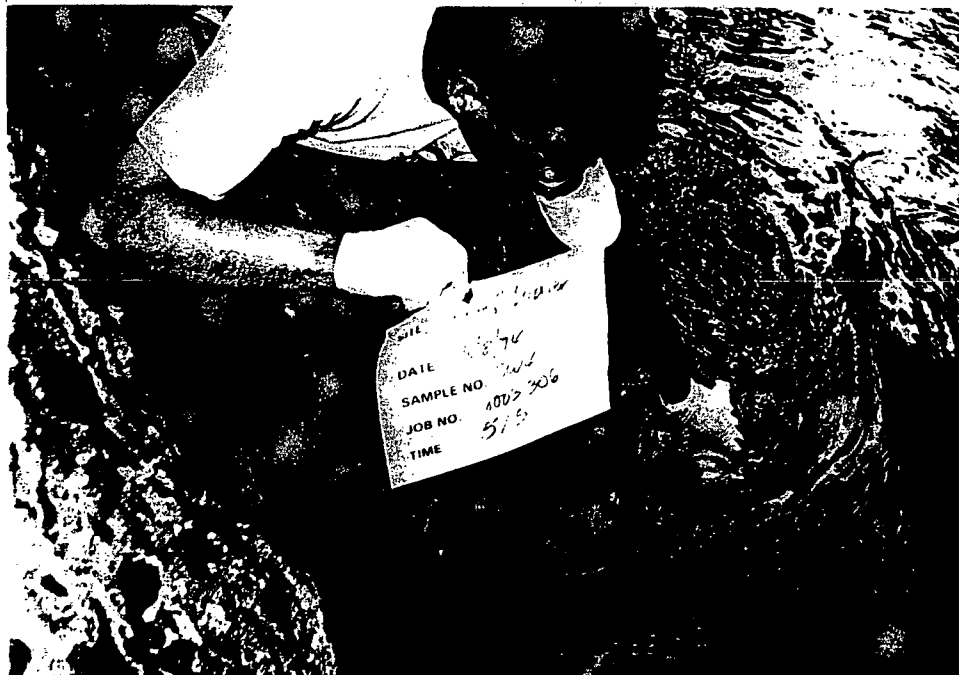
8003-306



7P & 73

Picture of D. Kahlenberg collecting SW3.

1505



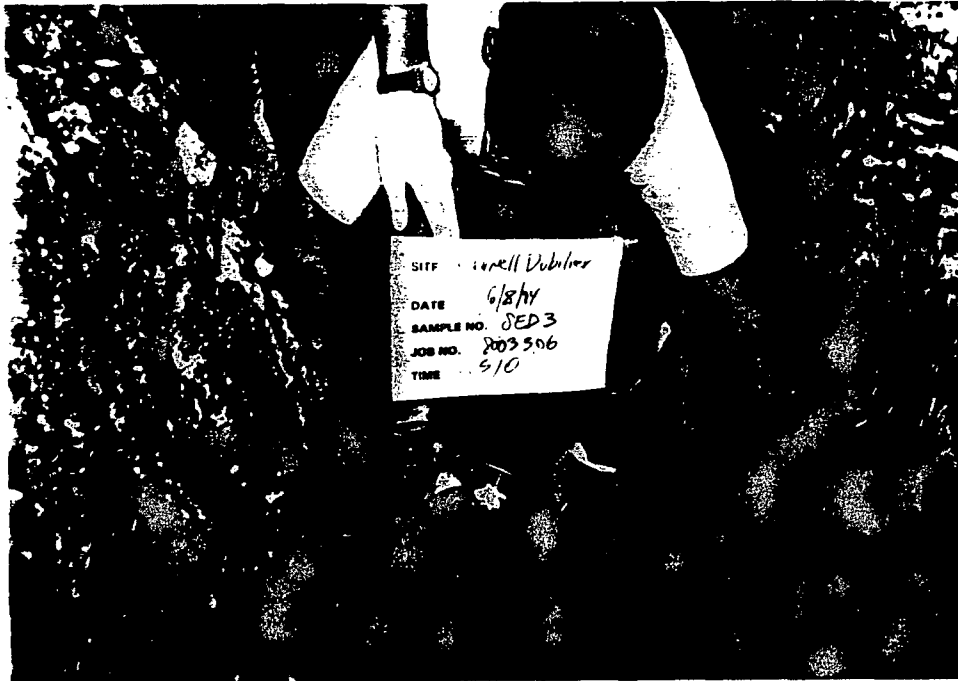
8P & 8S

Picture of D. Kahlenberg collecting SW4.

1510

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

8003-306



9P & 9S

Picture of D. Kahlenberg collecting SEDS.

1515



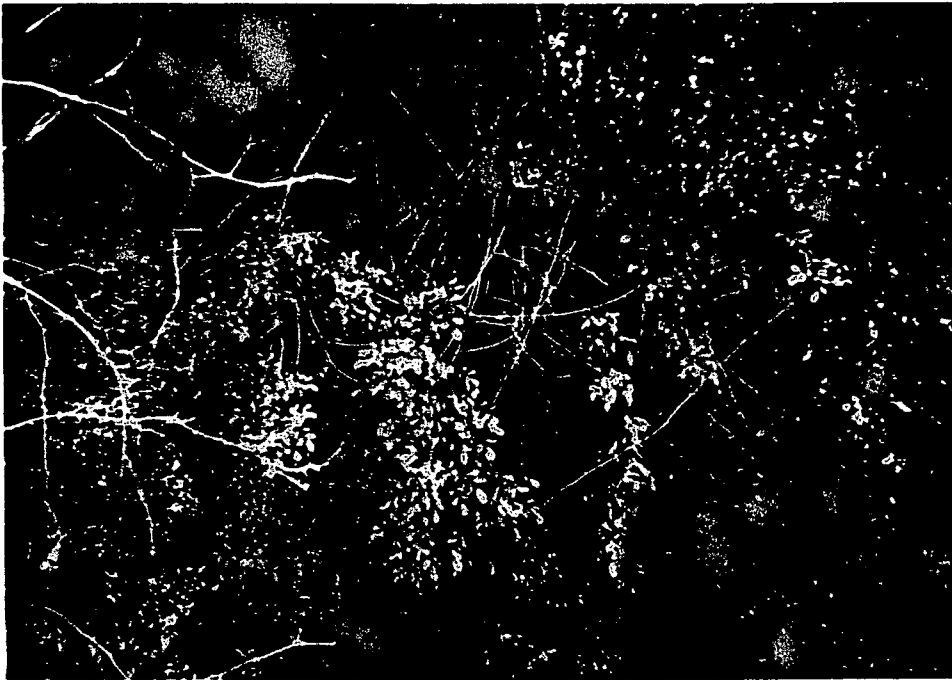
10P & 10S

Picture of effluent pipe stream convergence with unnamed tributary SW5/SED5.

1555

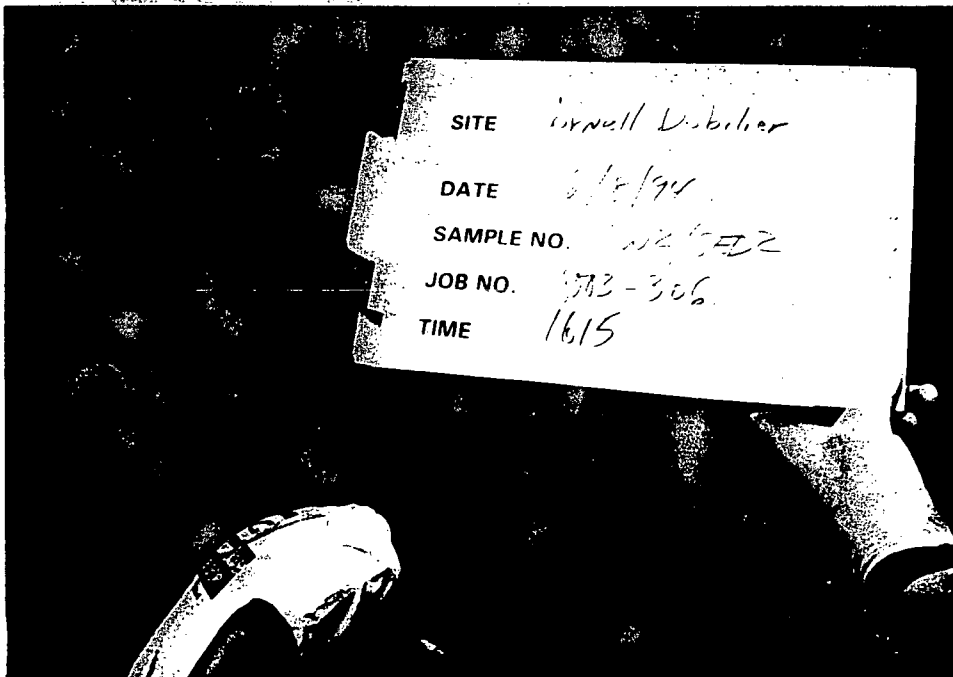
PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

8003-306



11P & 11S Picture of effluent pipe.

1555



12P & 12S Picture of D. Kahlenberg collecting SW2/SED2.

1615

PHOTOGRAPH LOG
Cornell Dubbler Electronics, Inc.
South Plainfield, NJ

8003-306



13P & 13S

Picture of D. Kahlenberg collecting SW1/SED 1 MS/MSD.

1645



14P & 14S

Picture of submerged 55 gallon drum.

1705

ATTACHMENT 3

EXHIBIT C

PHOTOGRAPH LOG

**CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY**

**SITE INSPECTION PRIORITIZATION
SECOND ROUND OF SAMPLING**

October 13, 1994

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

October 18, 1994

All photographs taken by Andy Cilbanoff on 10/18/94.

<u>Photo No.</u>	<u>Description</u>	<u>Time</u>
1P & 1S	Picture looking south at confluence of unnamed tributary to Bound Brook and unnamed stream off of Spicer Ave.	1115
2P & 2S	Picture of D. Kahlenberg collecting SED6.	1117
3P & 3S	Picture looking southeast at Bolmont Ave. bridge over unnamed tributary.	1146
4P & 4S	Picture of D. Kahlenberg collecting SED7/SED8.	1149
5P & 5S	Picture of D. Kahlenberg collecting RIH1.	1245
6P & 6S	Picture of D. Kahlenberg collecting RIN2.	1302

PHOTOGRAPH LOG
Cornell Dublier Electronics, Inc.
South Plainfield, NJ

8003-306



1P & 1S

Picture looking south at confluence of unnamed tributary
to Bound Brook and unnamed stream off of Spicer Ave.

1115



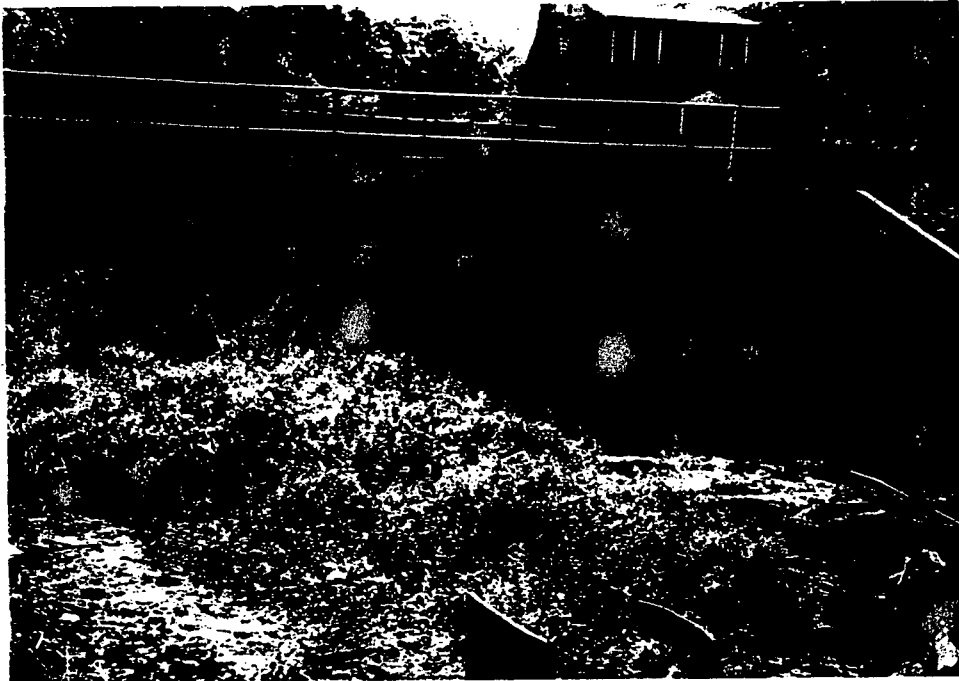
2P & 2S

Picture of D. KaNenberg collecting SED6.

1117

PHOTOGRAPH LOG
Cornell Dubbler Electronics, Inc.
South Plainfield, NJ

8003-306



3P & 3S

Picture looking southeast at Belmont Ave. bridge over
unnamed tributary.

1146



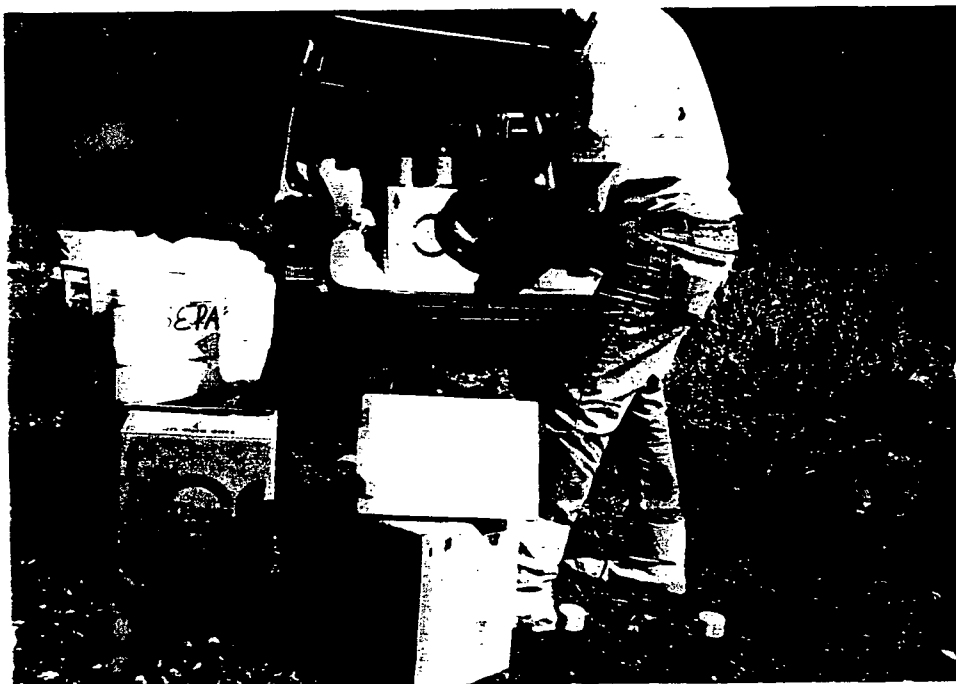
4P & 4S

Picture of D. KaNenberg cctlecting SED7/SED8.

1149

PHOTOGRAPH LOG
Cornell Dubler Electronics, Inc.
South Plainfield, NJ

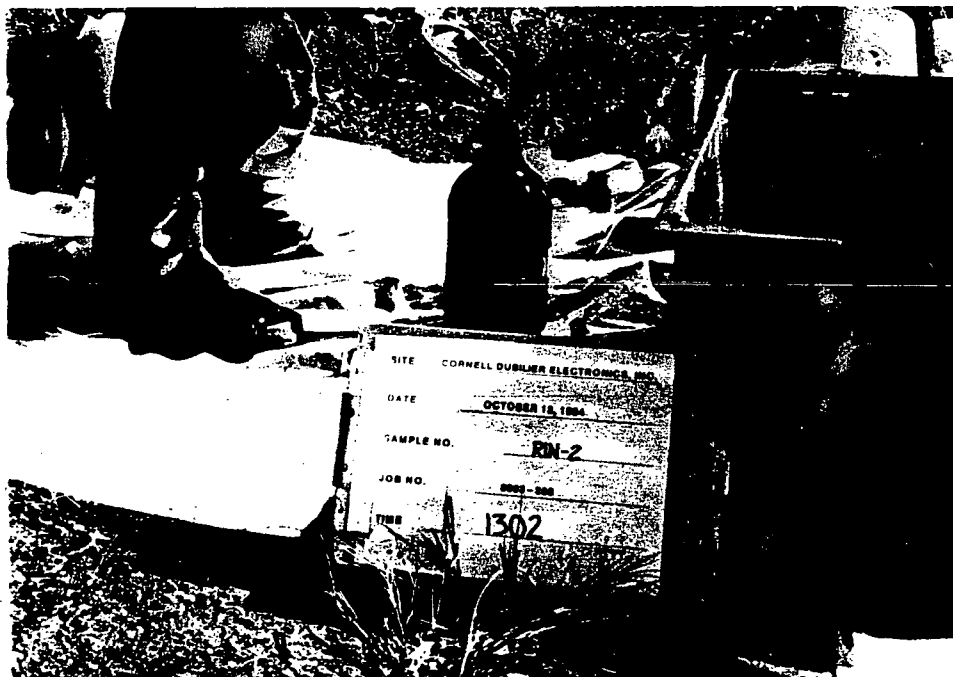
8003-306



5P & 5S

Picture of D. KaNenberg collecting RIN1.

1245



6P & 6S

Picture D. KaNenberg collecting RIN2.

1302

ATTACHMENT 4

REFERENCES

1. U. S. Environmental Protection Agency (EPA) Superfund Program, Comprehensive Environmental Response Compensation Liability Information System (CERCLIS), List 8: Site/Event Listing, p. 153, March 15, 1993.
2. Four-mile Vicinity Map for Cornell Dubilier Electronics, Inc. based on USGS Topographic Maps, 7.5 minute series, Quadrangles of "Plainfield, NJ, 1955, photorevised 1981", "Chatham, NJ, 1955, photorevised 1981", "Roselle, NJ, 1955, photorevised 1981", and "Perth Amboy, NJ, 1955, photorevised 1981".
3. Fifteen-Mile Surface Water Pathway Map based on U.S. Department of the Interior, Fish and Wildlife Service, Atlas of National Wetlands Inventory Maps for New Jersey, Quadrangles of "Plainfield, NJ, 1976", "Bound Brook, NJ, 1976", "Monmouth Junction, NJ, 1976", and "New Brunswick, NJ, 1976".
4. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Melcohm Pimle, Inc., Subject: Four-mile Radius Ring Populations, December 29, 1994.
5. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Melcohm Pimle, Inc., Subject: Groundwater Apportionment, January 31, 1994.
6. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Melcohm Pimle, Inc., Subject: Surface Water Pathway, February 8, 1994.
7. Telecon Note: Conversation between Bob Reiser, U.S. Geological Survey - New Jersey Office, and Andrew Clibanoff, Melcohm Pimle, Inc., February 2, 1994.
8. New Jersey Department of Environmental Protection (NJDEP), Bureau of Safe Drinking Water, Surface Water Intake Locations, March, 1992.
9. Surface Water Quality Standards, N.J.A.C. 7:9 - 4.1 et seq., Division of Water Resources, NJDEP, August, 1989.
10. Project Note: To Webcraft Packaging Company file, from Lisa Szegedi, Melcohm Pimle, Inc., Subject: Fisheries, June 21, 1993.
11. Telecon Note: Conversation between James Gaffney, Bureau of Water Supply Planning, NJDEP, and Gary Bielen, Melcohm Pimle, Inc., December 16, 1994.
12. Letter from Elena Williams, Division of Parks and Forestry, NJDEP, to Andrew Clibanoff, Melcohm Pimle, Inc., February 15, 1994.
13. Field Notebook, Cornell Dubilier Electronics, Inc., On-site Reconnaissance, Site Inspection Prioritization, Melcohm Pimle, Inc., March 30, 1994.
14. Field Notebook, Cornell Dubilier Electronics, Inc., Site Sampling Event, Site Inspection Prioritization, Melcohm Pimle, Inc., June 8, 1994.
15. Sample Trip Report, Cornell Dubilier Electronics, Inc. site, South Plainfield, New Jersey, June 21, 1994.

REFERENCES
(CONTINUED)

16. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Malcolm Pirnie, Inc., Subject: Analytical Data - June 8, 1994, December 28, 1994.
17. Field Notebook, Cornell Dubilier Electronics, Inc., Background Sediment Sampling Event, Site Inspection Prioritization, Malcolm Pirnie, Inc., October 13, 1994.
18. Sample Trip Report, Cornell Dubilier Electronics, Inc. site, South Plainfield, New Jersey, October 20, 1994.
19. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Malcolm Pirnie, Inc., Subject: Analytical Data - October 13, 1994, December 28, 1994.
20. Facsimile from Michale Bonk, South Plainfield Health Department, to Andy Clibanoff, Malcolm Pirnie, Inc., Subject: Cornell Dubilier Electronics - Chronology of Events, February 7, 1994.
21. Project Note: To Cornell Dubilier Electronics, Inc. file, from Andrew Clibanoff, Malcolm Pirnie, Inc., Subject: NJDEP Analytical Data - September 11, 1986, December 28, 1994.
22. Preliminary Assessment, Cornell Dubilier Electronics, Inc., South Plainfield, New Jersey, prepared for the USEPA, prepared by Leslie Solomon, NJDEP, Department of Hazardous Waste Management (DHWM), August 11, 1986.
23. Potential Hazardous Waste Site, Site Inspection Report, Cornell Dubilier Electronics, Inc., South Plainfield, New Jersey, prepared for the USEPA, prepared by Frank Faranca, NJDEP, DHWM, Bureau of Site Assessment, September 12, 1986.
24. Memorandum from Mike Proietti, NJDEP, to Vince Krisak, NJDEP, Subject: Cornell Dubilier Electronics Chronology of Events, March 12, 1985.
25. Policies and Practices for Managing Middlesex County's Groundwater Resources, Middlesex County Planning Board, Environmental Systems Section, September 1974, Revised January 1979.
26. Federal Register, Environmental Protection Agency, 40 CFR Part 300, Hazard Ranking System - Final Rule, December 14, 1990.
27. Project Note: To Cornell Dubilier Electronics, Inc. file, from Jin Ho Jang, Malcolm Pirnie, Inc., Subject: Current Tenant Operations - January 12, 1995.

REFERENCE NO. 1

RUN DATE: 03/16/93 16:14:56
CERCLIS DATA BASE DATE: 03/15/93
CERCLIS DATA BASE TIME: 13:22:21
VERSION 3.00

** PR00 VERSION **
U.S. EPA SUPERFUND PROGRAM
** C E K C L I S **
LIST=0: SITE/EVENT LISTING

PAGE: 153
CEKHELP DATA BASE DATE: N/A
CEKHELP DATA BASE TIME: N/A

SELECTION:

SEQUENCE: STATE, CUTOY LOUE, SITE NAME

EVENTS: ALL

EPA ID NO.	SITE NAME STREET CITY COUNTY CODE AND NAME	STATE ZIP COUNTY LIST	UPR6LE UNIT	EVENT TYPE	EVENT DATE	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
NJ0081982902	CHEVRON U.S.A-PERTH AMOY REFINERY 1200 STATE ST PERTH AMOY 023 MIDDLESEX	NJ 08861	00	US1 PA1 NPA		00/01/84	06/06/81 09/01/84	RESP. PARTY EPA (FUND)
NJ0056667470	CHICUPEE RESEARCH DIVISION 100 FORD AVENUE MILLTOWN 023 MIDDLESEX	NJ 08850	00	US1 PA1			06/06/89 04/27/89	EPA (FUND) EPA (FUND)
NJ0980528897	CHIPMAN CHEMICAL CO. 5 FACTORY LANE MIDDLESEX 023 MIDDLESEX	NJ 08846	00	US1 PA1 PA2 HK1 S11		03/01/89	07/01/79 03/01/80 03/08/89 08/01/82 02/03/89	EPA (FUND) EPA (FUND) STATE(FUND) OTHER STATE(FUND)
NJ0002145800	CITIES SERVICES CO. STOUTS LANE MUMMOUTH JUNCTION 023 MIDDLESEX	NJ 08852	00	US1 PA1 S11		12/01/80	01/01/80 81/01/84 01/01/81	EPA (FUND) EPA (FUND) EPA (FUND)
NJ006869J167	CULGATE PALMDLIVE COMPANY 909 RIVER ROAD PISCATAWAY 023 MIDDLESEX	NJ 08854	00	US1 PA1			06/06/89 04/27/89	EPA (FUND) EPA (FUND)
NJ0981557879	CUMMEL DUBILIER ELECTRONICS INC. 333 HAMILTON BLVD SOUTH PLAINFIELD 023 MIDDLESEX	NJ 07080	00	US1 PA1 S11		09/16/80	09/16/80 09/29/80 09/29/80	STATE(FUND) STATE(FUND) STATE(FUND)
NJ0002542595	CUTTERS INDUSTRIES 40-A CUTTERS LANE EAST BRUNSWICK 021 MIDDLESEX	NJ 08816	00	RS1		10/20/92	11/06/92	EPA (FUND)

FORM 101-3

PRINTED IN U.S.A.

PR

REFERENCE NO. 2



WELL LEGEND				
No.	Well Name	Depth	Formation	Population Served
Middlesex Water Company				
1	Park Ave. Wellfield (9 wells)	448-500	Brunswick	9,154
2	Park Ave. Wellfield (6 wells)	73-100	Stratified Drift	6,103
3	Spring Lake Wellfield (4 wells)	500-504	Brunswick	7,942
4	Maple Avenue Wellfield (2 wells)	351-421	Brunswick	3,971
5	Sprague Ave. Well #1	100.5	Stratified Drift	0
6	Sprague Ave. Well #2	100.5	Stratified Drift	3,553
7	Tingley Lane North Wellfield (5 wells)	540-700	Brunswick	7,106
	Tingley Lane South Wellfield (4 wells)	500-528	Brunswick	4,180
Elizabethtown Water Company				
8	Clinton Street Well	350	Brunswick	1,057
9	Eighth Street Well	350	Brunswick	1,057
10	Fth Street Well	350	Brunswick	1,057
11	Rock Ave. Well (Piscataway)	350	Brunswick	1,057
12	Board of Education Well	311	Brunswick	1,057
13	Fossop Street Well	350	Brunswick	1,057
14	Green Brook Wellfield (10 wells)	238-550	Brunswick	10,570
15	Rock Ave. Well (Green Brook)	300	Brunswick	1,057
16	Aberdeen Road Well	350	Brunswick	1,057
17	Netherwood Wellfield (3 wells)	350-500	Brunswick	3,171
TOTAL:				64,206

TITLE: FOUR-MILE VICINITY MAP

SITE NAME: CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

DATE: 2/28/94 SCALE: 1" = 2000'

REPORT NUMBER: 8003-306

USGS TOPO NAME: PLAINFIELD, NEW JERSEY

REFERENCE NO. 3



REFERENCE NO. 4

To: File

Date: December 29, 1994

From: Andrew Cilbanoff

Project #: 8003-306

Subject: Four-mile Radius Populations

Site Name: Cornell Dubilier Electronics, Inc.

Population estimation within four miles of the Cornell Dubilier Electronics site was accomplished using the Topologically Integrated Geographic Encoding and Referencing (TIGER) data base. The results of the data base analysis are shown in the table below.

Ring (miles)	Population
0 - ¼	541
¼ - ½	1,738
½ - 1	6,409
1 - 2	29,518
2 - 3	62,681
3 - 4	82,389
TOTAL POPULATION WITHIN 4 MILES:	183,276

E. The formula can be expressed:

$$\text{Area} = 1/2\{Xa(Ye-Yb) + Xb(Ya-Yb) + Xc(Yb-Yd) + Xd(Yc-Ye) + Xe(Yd-Ya)\}$$

For each ring, the selected Block Groups will be inside, outside, or intersected by the ring. When a polygon is intersected, the partial Block Group area within that ring is calculated using the method described below.

When a ring intersects a Block Group, the intersect points are solved and plotted at the points where the ring enters and exits the shape. The chord line, a line within the circle connecting the intersect points is determined. This chord line is used to calculate the segment area, the half moon shape between the chord line and the ring, and the sub-polygon created by the chord line and the Block Group boundaries that lie outside the ring.

The segment area is subtracted from the sub-polygon area to determine the area of the sub-polygon outside the ring. The area outside the ring is then subtracted from the area of the entire polygon to arrive at the inside area. This inside area is then divided by the tract's total area to determine the percentage of area within the ring. This process is repeated for each block group that is intersected by one of the rings. The total area, partial area, and percentage of partial area of those block groups within, or partially within a ring, are held in memory for the report.

On occasion, the algorithm described above is unable to determine the area of the partial area. Within the report program is a "Paint" routine which allows an enclosed shape to be highlighted. Another routine calculates the percentage of highlighted screen pixels to the pixels within the polygon. A manual entry is allowed. Both the "paint" method and manual entry method over ride the calculated method.

CENTRACTS lists, starting on page 4, all Block Groups in State, County, Census Tract, and Block Group ID order that lie within, or partially within, the maximum ring. Each Block Group is identified by a City or Town name and by the Block Group's State, County, Tract and Block Group ID number. Following is the Block Group's 1990 population and house count extracted from the Census Bureau's 1990 STF-1A files.

The next four columns display water source data from the 1990 STF-3A files. The first column is "Units with Public system or private company source of water", followed by "Units with individual well, Drilled, source of water"; "Units with individual well, Dug, source of water" and "Units with Other source of water".

For each ring, CENTRACTS then shows the Block Groups that are within that ring, the Block Group's total area in square miles, the partial area of the Block Group within that ring, and the partial percentage within the ring. The areas of the included Block Group and the partial areas are then totaled.

The last section tallies the demographic data within each ring. The percentage of area for each Block Group is multiplied times the census data for that Block Group and totaled for all Block Group's within the ring. Ring totals are then determined by subtracting the three mile data from the four mile, the two mile from the three mile, one from the two, etc... Population on private wells is calculated using the formula: $((\text{Drilled} + \text{Dug Wells}) / \text{Households}) * \text{Population}$

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

No.	City	Block Group ID	Blk Grp People	House Holds	Public Water	Drilled Wells	Dug Wells	Other
1	Middlesex	34023 0002	1 1797	708	645	40	8	0
2	Middlesex	34023 0002	2 1158	467	464	0	0	0
3	Middlesex	34023 0002	3 1493	539	516	15	0	0
4	Middlesex	34023 0002	4 1007	460	485	0	0	0
5	Dunellen	34023 0003	1 1067	404	379	9	0	0
6	Dunellen	34023 0003	2 1294	494	488	0	0	0
7	Dunellen	34023 0003	3 1602	551	556	9	0	0
8	Dunellen	34023 0003	4 437	154	148	10	0	0
9	Dunellen	34023 0003	5 1506	575	582	7	0	0
10	Dunellen	34023 0003	5 622	218	208	0	0	0
11	Piscataway	34023 0007	1 1581	566	420	88	0	0
12	Piscataway	34023 0007	2 788	271	208	32	0	0
13	Piscataway	34023 0007	3 1646	558	488	63	8	0
14	Piscataway	34023 0007	7 1245	395	396	9	0	0
15	Metuchen	34023 0020	1 1643	559	661	11	0	0
16	Metuchen	34023 0020	2 515	189	182	0	0	0
17	Metuchen	34023 0020	3 1272	402	396	0	0	0
18	Metuchen	34023 0022	1 920	411	428	0	0	0
19	Metuchen	34023 0022	2 972	397	386	0	0	0
20	Metuchen	34023 0022	3 1621	553	647	0	0	0
21	Woodbridge	34023 0025	4 1335	403	380	0	0	0
22	Piscataway	34023 0004011	1480	500	509	31	0	0
23	Piscataway	34023 0004012	1091	343	294	10	0	0
24	Piscataway	34023 0004013	1123	330	308	21	0	0
25	Piscataway	34023 0004031	621	203	184	17	0	0
25	Piscataway	34023 0004032	1568	521	361	146	21	0
27	Piscataway	34023 0004041	830	260	228	20	5	0
28	Piscataway	34023 0004042	847	354	329	24	0	0
29	Piscataway	34023 0004043	1756	564	485	57	5	0
30	Piscataway	34023 0004044	1114	529	520	23	6	0
31	Piscataway	34023 0005011	1223	389	235	91	46	0
32	Piscataway	34023 0005012	1699	527	491	45	5	0
33	Piscataway	34023 0005013	1718	572	513	56	5	0
34	Piscataway	34023 0005021	3147	1263	1225	0	0	0
35	Piscataway	34023 0005022	2785	1253	1267	24	0	0
36	Piscataway	34023 0006031	1423	456	346	52	5	0
37	Piscataway	34023 0006032	752	328	274	91	7	0
38	Piscataway	34023 0006043	3131	1132	1016	121	0	0
39	Piscataway	34023 0006051	2111	7	0	5	0	0
40	Piscataway	34023 0006052	416	122	105	6	7	0
41	Piscataway	34023 0006061	2107	621	592	9	7	0
42	Piscataway	34023 0006062	2743	860	864	15	0	0
43	South Plainfield	34023 0008011	585	198	196	5	0	0
44	South Plainfield	34023 0008012	1207	420	403	0	0	0
45	South Plainfield	34023 0008013	1369	452	433	35	0	0
46	South Plainfield	34023 0008014	515	171	159	10	0	0
47	South Plainfield	34023 0008021	1658	562	558	7	0	0
48	South Plainfield	34023 0008022	1058	367	364	0	0	0
49	South Plainfield	34023 0009011	624	220	205	5	0	0
50	South Plainfield	34023 0009012	1610	547	542	6	0	0
51	South Plainfield	34023 0009021	860	309	287	7	0	0
52	South Plainfield	34023 0009022	1075	367	407	0	0	0

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

53	South Plainfield	34023 0009023	1098	372	378	0	0	0
54	South Plainfield	34023 0009024	753	256	236	0	0	0
55	South Plainfield	34023 0009025	741	261	258	0	0	0
56	South Plainfield	34023 0010011	648	204	198	0	0	0
57	South Plainfield	34023 0010012	2083	673	579	0	0	0
58	South Plainfield	34023 0010021	94	32	35	0	0	0
59	South Plainfield	34023 0010022	549	178	169	0	0	0
60	South Plainfield	34023 0010023	2171	688	624	106	0	0
61	South Plainfield	34023 0010024	91	41	14	25	0	0
62	South Plainfield	34023 0010025	135	48	0	49	0	0
53	South Plainfield	34023 0010025	1089	351	270	60	9	0
54	South Plainfield	34023 0010027	466	106	83	0	0	0
55	Edison	34023 0014051	16	5	5	0	0	0
66	Edison	34023 0014052	532	177	161	0	0	0
67	Edison	34023 0014053	536	277	266	0	0	0
58	Edison	34023 0014054	1107	408	421	9	0	0
69	Edison	34023 0014055	865	298	293	0	0	0
70	Edison	34023 0014061	1056	337	346	6	0	0
71	Edison	34023 0014062	872	275	261	5	0	0
72	Edison	34023 0014063	1609	540	516	23	0	0
73	Edison	34023 0014064	1023	372	365	12	0	0
74	Edison	34023 0014071	589	182	175	0	0	0
75	Edison	34023 0014072	2073	668	657	28	0	0
76	Edison	34023 0014073	585	340	318	0	0	0
77	Edison	34023 0014074	960	538	550	0	0	0
78	Edison	34023 0014081	1127	353	351	9	0	0
79	Edison	34023 0014082	1685	636	620	0	0	0
80	Edison	34023 0014083	1629	587	596	0	0	0
81	Edison	34023 0014091	1008	301	274	16	0	0
82	Edison	34023 0014092	1824	552	500	60	0	0
83	Edison	34023 0014093	1165	333	331	5	0	0
84	Edison	34023 0014101	2000	550	561	11	0	0
85	Edison	34023 0014102	2844	1025	1003	0	0	0
86	Edison	34023 0014111	805	270	278	0	0	0
87	Edison	34023 0014112	1235	396	358	37	0	0
88	Edison	34023 0014113	1268	379	334	31	7	0
89	Edison	34023 0014121	991	485	484	8	0	0
90	Edison	34023 0014122	1692	573	518	35	13	0
91	Edison	34023 0014131	2657	1032	1009	0	0	0
92	Edison	34023 0014132	1373	386	345	64	0	0
93	Edison	34023 0015021	150	73	67	0	0	0
94	Edison	34023 0015022	1986	765	820	0	0	0
95	Edison	34023 0015023	1413	452	425	0	0	0
96	Edison	34023 0015031	7308	2591	2549	22	20	0
97	Edison	34023 0015041	962	265	248	0	0	0
98	Edison	34023 0015042	3215	1326	1339	8	0	0
99	Edison	34023 0015043	282	86	82	0	0	0
100	Edison	34023 0017011	1273	422	420	0	0	0
101	Edison	34023 0017012	1726	548	528	0	0	0
102	Edison	34023 0017013	2075	695	730	0	0	0
103	Edison	34023 0019011	3789	1601	1606	0	0	0
104	Metuchen	34023 0021011	449	166	154	0	0	0
105	Metuchen	34023 0021012	1083	395	401	6	0	0
106	Metuchen	34023 0021013	753	290	288	0	0	0
107	Metuchen	34023 0021021	902	377	357	0	0	0

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

108	Metuchen	34023	0021022	650	235	236	0	0	0
109	Metuchen	34023	0021023	357	148	150	0	0	0
110	Metuchen	34023	0021024	1052	472	492	0	0	0
111	Metuchen	34023	0021025	595	302	302	0	0	0
112	North Plainfield	34035	0518 1	817	322	321	0	8	0
113	North Plainfield	34035	0518 2	775	318	303	13	0	0
114	North Plainfield	34035	0518 3	1125	461	489	0	0	0
115	North Plainfield	34035	0518 4	775	277	244	0	0	0
116	North Plainfield	34035	0519 1	1007	360	337	17	0	0
117	North Plainfield	34035	0519 2	820	289	270	5	0	0
118	North Plainfield	34035	0519 3	820	295	312	0	0	0
119	North Plainfield	34035	0519 4	1121	436	439	0	0	0
120	Green Brook	34035	0521 1	1830	580	460	142	7	0
121	Green Brook	34035	0521 2	513	228	182	30	0	0
122	Green Brook	34035	0521 3	580	230	243	0	0	0
123	Green Brook	34035	0521 4	1337	420	276	115	3	0
124	Watchung	34035	0523 2	1901	631	447	201	10	0
125	Watchung	34035	0523 3	500	213	71	141	15	0
126	Watchung	34035	0523 4	1473	543	397	76	40	0
127	North Plainfield	34035	0517981	502	234	221	0	0	0
128	North Plainfield	34035	0517982	1154	446	456	0	0	0
129	North Plainfield	34035	0517983	906	347	365	0	0	0
130	North Plainfield	34035	0517984	1226	439	417	7	0	0
131	North Plainfield	34035	0520021	1515	915	884	0	0	0
132	North Plainfield	34035	0520022	2616	1338	1347	13	0	9
133	North Plainfield	34035	0520981	1448	515	504	0	0	0
134	North Plainfield	34035	0520982	1257	464	457	17	0	0
135	North Plainfield	34035	0520983	835	327	328	0	0	0
136	Clark	34039	0363 5	1676	807	823	0	0	0
137	Scotch Plains	34039	0386 3	1011	338	338	0	0	0
138	Scotch Plains	34039	0386 5	953	341	341	14	0	0
139	Scotch Plains	34039	0386 7	1205	399	397	0	0	0
140	Scotch Plains	34039	0386 9	2446	943	925	39	0	0
141	Fanwood	34039	0387 5	1193	420	397	0	0	0
142	Plainfield	34039	0388 2	1545	519	496	5	0	0
143	Plainfield	34039	0388 3	530	192	204	3	0	0
144	Plainfield	34039	0388 4	1126	390	397	0	0	0
145	Plainfield	34039	0389 1	548	204	199	0	0	0
146	Plainfield	34039	0389 2	477	170	147	0	0	0
147	Plainfield	34039	0389 3	1551	522	541	0	0	0
148	Plainfield	34039	0389 4	2170	848	835	0	22	0
149	Plainfield	34039	0390 1	754	232	258	0	0	0
150	Plainfield	34039	0390 2	1334	593	511	0	0	0
151	Plainfield	34039	0390 3	1143	358	404	0	0	0
152	Plainfield	34039	0390 4	377	144	173	0	0	0
153	Plainfield	34039	0391 1	1526	538	550	0	0	0
154	Plainfield	34039	0391 2	755	283	280	0	0	0
155	Plainfield	34039	0391 3	520	205	193	0	0	0
156	Plainfield	34039	0391 4	679	252	236	0	0	0
157	Plainfield	34039	0392 1	900	275	256	0	0	0
158	Plainfield	34039	0392 2	1380	467	495	0	0	0
159	Plainfield	34039	0392 3	1292	554	552	0	0	0
160	Plainfield	34039	0392 4	1081	490	483	0	0	0
161	Plainfield	34039	0393 1	872	271	256	0	0	0
162	Plainfield	34039	0393 2	361	114	111	0	0	0

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

163	Plainfield	34039 0393	3	1150	396	395	0	0	0
164	Plainfield	34039 0393	4	2556	787	805	0	0	0
165	Plainfield	34039 0394	1	1835	586	569	0	0	0
165	Plainfield	34039 0394	2	1709	479	451	14	0	0
157	Plainfield	34039 0394	3	1234	444	475	0	0	0
158	Plainfield	34039 0395	1	1922	551	546	0	0	0
159	Plainfield	34039 0395	2	869	245	227	0	0	0
170	Plainfield	34039 0395	3	596	173	178	0	0	0
171	Plainfield	34039 0395	4	1341	387	428	0	0	0
172	Plainfield	34039 0395	5	1308	348	335	0	0	0
173	Plainfield	34039 0396	1	1311	533	519	8	0	0
174	Plainfield	34039 0396	2	1169	476	451	0	0	0
175	Plainfield	34039 0396	3	1550	500	531	0	0	0
176	Plainfield	34039 0397	1	1253	466	431	0	0	0
177	Plainfield	34039 0397	2	1623	519	521	10	0	0
178	Plainfield	34039 0397	3	1580	513	500	4	0	0
179	Plainfield	34039 0397	4	1193	471	499	0	0	0
180	Plainfield	34039 0398	3	4	1	0	0	0	0
181	Plainfield	34039 0399	3	3	1	6	0	0	0
182	Elizabeth	34039 0301991		305	0	0	0	0	0
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	Totals:			226041	80401	77334	2744	290	9

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

City	Census Tract ID		Tract People	House Count	Public Water	Drilled Wells	Dug Wells	Other Wells
Clark	34039 0363	5	1575	807	823	0	0	0
Sub Totals:			1576	807	823	0	0	0
Dunellen	34023 0003	3	1502	551	656	9	0	0
Dunellen	34023 0003	4	437	154	148	10	0	0
Dunellen	34023 0003	5	1506	575	582	7	0	0
Dunellen	34023 0003	1	1067	404	379	9	0	0
Dunellen	34023 0003	2	1294	494	488	0	0	0
Dunellen	34023 0003	6	622	218	208	0	0	0
Sub Totals:			6528	2496	2461	35	0	0
Edison	34023 0015021		150	73	57	0	0	0
Edison	34023 0015023		1413	452	425	0	0	0
Edison	34023 0015022		1985	765	820	0	0	0
Edison	34023 0017013		2075	695	730	0	0	0
Edison	34023 0019011		3789	1601	1606	0	0	0
Edison	34023 0014083		1629	587	596	0	0	0
Edison	34023 0014091		1008	301	274	15	0	0
Edison	34023 0014092		1824	552	500	60	0	0
Edison	34023 0014093		1165	333	331	5	0	0
Edison	34023 0014101		2000	550	561	11	0	0
Edison	34023 0014102		2844	1025	1003	0	0	0
Edison	34023 0014111		805	270	278	0	0	0
Edison	34023 0014051		16	6	6	0	0	0
Edison	34023 0014052		532	177	161	0	0	0
Edison	34023 0014053		536	277	266	0	0	0
Edison	34023 0014132		1373	386	345	54	0	0
Edison	34023 0014055		865	298	293	0	0	0
Edison	34023 0014061		1056	337	346	5	0	0
Edison	34023 0014062		872	275	261	5	0	0
Edison	34023 0014063		1609	540	516	23	0	0
Edison	34023 0014064		1023	372	365	12	0	0
Edison	34023 0014071		589	182	175	0	0	0
Edison	34023 0014072		2073	558	657	28	0	0
Edison	34023 0014073		585	340	318	0	0	0
Edison	34023 0014074		960	538	550	0	0	0
Edison	34023 0014081		1127	353	351	9	0	0
Edison	34023 0014082		1685	636	520	0	0	0
Edison	34023 0014131		2657	1032	1009	0	0	0
Edison	34023 0015041		962	265	248	0	0	0
Edison	34023 0014112		1235	396	358	37	0	0
Edison	34023 0014113		1268	379	334	31	7	0
Edison	34023 0014121		991	485	484	8	0	0
Edison	34023 0015031		7308	2591	2549	22	20	0
Edison	34023 0014122		1692	573	518	35	13	0
Edison	34023 0015043		282	86	82	0	0	0
Edison	34023 0015042		3215	1326	1339	8	0	0
Edison	34023 0017012		1725	548	528	0	0	0

Cornell Dubilier Electronics, Inc.
South Plainfield, NJ

Edison	34023	0014054	1107	408	421	9	0	0
Edison	34023	0017011	1273	422	420	0	0	0
Sub Totals:			59305	21100	20711	389	40	0
Elizabeth	34039	0301991	305	0	0	0	0	0
Sub Totals:			305	0	0	0	0	0
Fanwood	34039	0387 5	1193	420	397	0	0	0
Sub Totals:			1193	420	397	0	0	0
Green Brook	34035	0521 1	1830	580	460	142	7	0
Green Brook	34035	0521 2	513	228	182	30	0	0
Green Brook	34035	0521 3	580	230	243	0	0	0
Green Brook	34035	0521 4	1337	420	276	115	3	0
Sub Totals:			4450	1458	1161	287	10	0
Metuchen	34023	0020 1	1643	559	661	11	0	0
Metuchen	34023	0020 2	515	189	182	0	0	0
Metuchen	34023	0022 2	972	397	386	0	0	0
Metuchen	34023	0021012	1083	395	401	5	0	0
Metuchen	34023	0021011	449	166	154	0	0	0
Metuchen	34023	0021024	1062	472	492	0	0	0
Metuchen	34023	0021022	650	235	236	0	0	0
Metuchen	34023	0020 3	1272	402	396	0	0	0
Metuchen	34023	0022 1	920	411	428	0	0	0
Metuchen	34023	0021021	902	377	357	0	0	0
Metuchen	34023	0021023	367	148	150	0	0	0
Metuchen	34023	0021013	753	290	288	0	0	0
Metuchen	34023	0021025	595	302	302	0	0	0
Metuchen	34023	0022 3	1621	653	547	0	0	0
Sub Totals:			12804	5097	5080	17	0	0
Middlesex	34023	0002 3	1493	539	516	16	0	0
Middlesex	34023	0002 4	1007	460	485	0	0	0
Middlesex	34023	0002 2	1158	467	464	0	0	0
Middlesex	34023	0002 1	1797	708	545	40	8	0
Sub Totals:			5455	2174	2110	56	8	0
North Plainfield	34035	0517982	1154	446	456	0	0	0
North Plainfield	34035	0518 2	776	318	303	13	0	0
North Plainfield	34035	0518 4	775	277	244	0	0	0
North Plainfield	34035	0517984	1226	439	417	7	0	0
North Plainfield	34035	0517981	502	234	221	0	0	0
North Plainfield	34035	0519 2	820	289	270	6	0	0
North Plainfield	34035	0519 3	820	296	312	0	0	0
North Plainfield	34035	0518 3	1125	461	489	0	0	0
North Plainfield	34035	0518 1	817	322	321	0	8	0
North Plainfield	34035	0520021	1515	915	884	0	0	0
North Plainfield	34035	0519 1	1007	360	337	17	0	0

Cornell Submitter Electronics, Inc.
 South Plainfield, NJ

North Plainfield	34035	0520981	1448	515	504	0	0	0
North Plainfield	34035	0520983	835	327	328	0	0	0
North Plainfield	34035	0520982	1257	464	457	17	0	0
North Plainfield	34035	0519	4	1121	436	439	0	0
North Plainfield	34035	0520022	2516	1338	1347	13	0	9
North Plainfield	34035	0517983	905	347	355	0	0	0

Sub Totals:			18820	7784	7594	73	8	9
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Piscataway	34023	0007	7	1245	395	395	9	0	0
Piscataway	34023	0007	2	788	271	208	32	0	0
Piscataway	34023	0005022		2785	1253	1257	24	0	0
Piscataway	34023	0004011		1480	500	509	31	0	0
Piscataway	34023	0007	3	1545	558	488	53	8	0
Piscataway	34023	0004013		1123	330	308	21	0	0
Piscataway	34023	0007	1	1581	555	420	88	0	0
Piscataway	34023	0005021		3147	1253	1225	0	0	0
Piscataway	34023	0004041		830	250	228	20	5	0
Piscataway	34023	0004042		347	354	329	24	0	0
Piscataway	34023	0004043		1755	554	485	57	5	0
Piscataway	34023	0004031		621	203	184	17	0	0
Piscataway	34023	0005013		1718	572	513	56	5	0
Piscataway	34023	0005012		1699	527	491	45	5	0
Piscataway	34023	0006043		3131	1132	1016	121	0	0
Piscataway	34023	0004012		1091	343	294	10	0	0
Piscataway	34023	0006052		416	122	105	6	7	0
Piscataway	34023	0006031		1423	456	346	52	5	0
Piscataway	34023	0005032		752	328	274	91	7	0
Piscataway	34023	0004032		1568	521	361	146	21	0
Piscataway	34023	0006051		2111	7	0	5	0	0
Piscataway	34023	0005011		1223	389	235	91	45	0
Piscataway	34023	0004044		1114	529	520	23	6	0
Piscataway	34023	0006062		2743	860	864	15	0	0
Piscataway	34023	0006051		2107	521	592	9	7	0

Sub Totals:			38945	12924	11558	1055	128	0
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Plainfield	34039	0390	2	1334	593	511	0	0	0
Plainfield	34039	0399	3	3	1	6	0	0	0
Plainfield	34039	0392	3	1292	554	552	0	0	0
Plainfield	34039	0390	1	754	232	258	0	0	0
Plainfield	34039	0389	4	2170	848	835	0	22	0
Plainfield	34039	0388	2	1545	519	496	5	0	0
Plainfield	34039	0388	3	530	192	204	3	0	0
Plainfield	34039	0388	4	1126	390	397	0	0	0
Plainfield	34039	0392	4	1081	490	483	0	0	0
Plainfield	34039	0392	1	900	275	256	0	0	0
Plainfield	34039	0389	3	1551	522	541	0	0	0
Plainfield	34039	0395	2	869	245	227	0	0	0
Plainfield	34039	0395	3	595	173	178	0	0	0
Plainfield	34039	0395	4	1341	387	428	0	0	0
Plainfield	34039	0390	3	1143	358	404	0	0	0
Plainfield	34039	0390	4	377	144	173	0	0	0
Plainfield	34039	0391	1	1526	538	550	0	0	0
Plainfield	34039	0391	2	755	283	280	0	0	0

Cornell Dubilier Electronics, Inc.
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Plainfield	34039	0391	3	520	205	193	0	0	0
Plainfield	34039	0389	1	548	204	199	0	0	0
Plainfield	34039	0389	2	477	170	147	0	0	0
Plainfield	34039	0397	4	1193	471	499	0	0	0
Plainfield	34039	0398	3	4	1	0	0	0	0
Plainfield	34039	0392	2	1380	457	495	0	0	0
Plainfield	34039	0393	4	2556	787	805	0	0	0
Plainfield	34039	0394	1	1835	585	559	0	0	0
Plainfield	34039	0393	1	372	271	256	0	0	0
Plainfield	34039	0393	2	351	114	111	0	0	0
Plainfield	34039	0393	3	1150	395	396	0	0	0
Plainfield	34039	0395	2	1159	475	451	0	0	0
Plainfield	34039	0396	3	1550	500	531	0	0	0
Plainfield	34039	0394	2	1709	479	451	14	0	0
Plainfield	34039	0394	3	1234	444	475	0	0	0
Plainfield	34039	0395	1	1922	561	546	0	0	0
Plainfield	34039	0397	3	1580	513	500	4	0	0
Plainfield	34039	0395	5	1308	348	335	0	0	0
Plainfield	34039	0397	1	1253	466	431	0	0	0
Plainfield	34039	0391	4	679	252	236	0	0	0
Plainfield	34039	0395	1	1311	533	519	8	0	0
Plainfield	34039	0397	2	1523	519	521	10	0	0

Sub Totals:			45137	15507	15445	44	22	0
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Scotch Plains	34039	0386	9	2445	943	925	39	0	0
Scotch Plains	34039	0386	7	1205	399	397	0	0	0
Scotch Plains	34039	0386	5	953	341	341	14	0	0
Scotch Plains	34039	0386	3	1011	338	338	0	0	0

Sub Totals:			5515	2021	2001	53	0	0
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South Plainfield	34023	0010021		94	32	35	0	0	0
South Plainfield	34023	0010011		548	204	198	0	0	0
South Plainfield	34023	0010012		2083	573	579	0	0	0
South Plainfield	34023	0008021		1558	562	558	7	0	0
South Plainfield	34023	0008022		1058	367	354	0	0	0
South Plainfield	34023	0008011		585	198	196	5	0	0
South Plainfield	34023	0009012		1610	547	542	5	0	0
South Plainfield	34023	0009021		860	309	287	7	0	0
South Plainfield	34023	0009022		1075	367	407	0	0	0
South Plainfield	34023	0009023		1098	372	378	0	0	0
South Plainfield	34023	0009011		524	220	205	6	0	0
South Plainfield	34023	0009025		741	261	258	0	0	0
South Plainfield	34023	0008012		1207	420	403	0	0	0
South Plainfield	34023	0008013		1359	452	433	35	0	0
South Plainfield	34023	0008014		515	171	159	10	0	0
South Plainfield	34023	0010022		549	178	169	0	0	0
South Plainfield	34023	0010023		2171	688	624	106	0	0
South Plainfield	34023	0010024		91	41	14	25	0	0
South Plainfield	34023	0010025		135	48	0	49	0	0
South Plainfield	34023	0010026		1089	351	270	60	9	0
South Plainfield	34023	0010027		466	106	83	0	0	0
South Plainfield	34023	0009024		753	256	236	0	0	0

Cornell Dubilier Electronics, Inc.
 South Plainfield, NJ

	Sub Totals:		20489	6823	6498	316	9	0
Watchung	34035 0523	3	600	213	71	141	15	0
Watchung	34035 0523	2	1901	631	447	201	10	0
Watchung	34035 0523	4	1473	643	397	76	40	0
	Sub Totals:		3974	1387	915	418	65	0
Woodbridge	34023 0025	4	1335	403	380	0	0	0
	Sub Totals:		1335	403	380	0	0	0

For Radius of 4 Mi., Circle Area = 50.265482

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Middlesex	34023 21	0.342532	0.302502	88.31
2	Middlesex	34023 22	0.519439	0.514027	98.95
3	Middlesex	34023 23	0.369483	0.021539	5.83
4	Middlesex	34023 24	0.357255	0.068274	19.11
5	Dunellen	34023 31	0.161859	0.161859	100.00
6	Dunellen	34023 32	0.197137	0.197137	100.00
7	Dunellen	34023 33	0.204356	0.204356	100.00
8	Dunellen	34023 34	0.082426	0.082425	100.00
9	Dunellen	34023 35	0.218639	0.218639	100.00
10	Dunellen	34023 36	0.143216	0.143216	100.00
11	Piscataway	34023 71	1.470830	0.002499	0.17
12	Piscataway	34023 72	0.559912	0.011489	2.05
13	Piscataway	34023 73	0.592920	0.052444	10.53
14	Piscataway	34023 77	0.637815	0.109764	17.21
15	Metuchen	34023 201	0.282289	0.282289	100.00
15	Metuchen	34023 202	0.360493	0.350493	100.00
17	Metuchen	34023 203	0.285831	0.285831	100.00
18	Metuchen	34023 221	0.190660	0.006967	3.65
19	Metuchen	34023 222	0.202403	0.201538	99.57
20	Metuchen	34023 223	0.209130	0.083276	39.82
21	Woodbridge	34023 254	0.155207	0.000072	0.05
22	Piscataway	34023 4011	0.331425	0.331425	100.00
23	Piscataway	34023 4012	0.247431	0.247431	100.00
24	Piscataway	34023 4013	0.259538	0.259538	100.00
25	Piscataway	34023 4031	0.323174	0.165981	51.35
25	Piscataway	34023 4032	0.496221	0.496221	100.00
27	Piscataway	34023 4041	0.112094	0.112094	100.00
28	Piscataway	34023 4042	0.123470	0.123470	100.00
29	Piscataway	34023 4043	0.437060	0.437060	100.00
30	Piscataway	34023 4044	0.254274	0.254274	100.00
31	Piscataway	34023 5011	0.179553	0.179553	100.00
32	Piscataway	34023 5012	0.310163	0.310153	100.00
33	Piscataway	34023 5013	0.452055	0.452055	100.00
34	Piscataway	34023 5021	0.555172	0.555172	100.00
35	Piscataway	34023 5022	0.358842	0.358842	100.00
35	Piscataway	34023 5031	1.149944	1.125389	97.85
37	Piscataway	34023 5032	2.847483	2.776529	97.51
38	Piscataway	34023 5043	0.703060	0.522365	74.30
39	Piscataway	34023 5051	0.451985	0.374000	82.75
40	Piscataway	34023 5052	0.922207	0.015723	1.70
41	Piscataway	34023 6061	0.561330	0.561330	100.00
42	Piscataway	34023 6062	1.377090	1.377090	100.00
43	South Plainfield	34023 8011	0.093691	0.093691	100.00
44	South Plainfield	34023 8012	0.235293	0.235293	100.00
45	South Plainfield	34023 8013	0.221529	0.221529	100.00
45	South Plainfield	34023 8014	0.141593	0.141593	100.00
47	South Plainfield	34023 8021	0.287524	0.287524	100.00

1	South Plainfield	34023	10011	0.350484	0.350484	100.00
2	South Plainfield	34023	10011	0.191719	0.191719	100.00
3	South Plainfield	34023	10012	0.381414	0.381414	100.00
4	South Plainfield	34023	10021	0.155084	0.155084	100.00
5	South Plainfield	34023	10022	0.377789	0.377789	100.00
6	South Plainfield	34023	10023	0.164688	0.164688	100.00
7	South Plainfield	34023	10024	0.186602	0.186602	100.00
8	South Plainfield	34023	10025	0.113750	0.113750	100.00
9	South Plainfield	34023	10011	0.226820	0.226820	100.00
10	South Plainfield	34023	10012	0.459810	0.459810	100.00
11	South Plainfield	34023	10021	0.531125	0.531125	100.00
12	South Plainfield	34023	10022	0.175147	0.175147	100.00
13	South Plainfield	34023	10024	0.538539	0.538539	100.00
14	South Plainfield	34023	10025	0.438314	0.438314	100.00
15	South Plainfield	34023	10025	1.124209	1.124209	100.00
16	South Plainfield	34023	10027	0.848255	0.848255	100.00
17	Edison	34023	14051	0.533442	0.633442	100.00
18	Edison	34023	14052	0.157117	0.167117	100.00
19	Edison	34023	14053	0.184523	0.184523	100.00
20	Edison	34023	14054	0.176378	0.176378	100.00
21	Edison	34023	14055	0.239941	0.239941	100.00
22	Edison	34023	14051	0.438845	0.438845	100.00
23	Edison	34023	14052	0.302332	0.302332	100.00
24	Edison	34023	14053	0.497921	0.497921	100.00
25	Edison	34023	14054	0.531001	0.531001	100.00
26	Edison	34023	14071	0.120980	0.120658	99.73
27	Edison	34023	14072	0.598462	0.494134	82.57
28	Edison	34023	14073	0.228552	0.001193	0.52
29	Edison	34023	14074	0.145379	0.066560	45.78
30	Edison	34023	14081	0.290521	0.290521	100.00
31	Edison	34023	14082	0.091870	0.091870	100.00
32	Edison	34023	14083	0.143707	0.108185	75.28
33	Edison	34023	14091	0.334129	0.334129	100.00
34	Edison	34023	14092	0.497178	0.484907	97.53
35	Edison	34023	14093	0.183569	0.183559	100.00
36	Edison	34023	14101	0.349537	0.349537	100.00
37	Edison	34023	14102	0.410002	0.410002	100.00
38	Edison	34023	14111	0.377418	0.377418	100.00
39	Edison	34023	14112	0.222807	0.069462	31.18
40	Edison	34023	14113	0.293985	0.215174	73.53
41	Edison	34023	14121	0.252843	0.252843	100.00
42	Edison	34023	14122	1.391675	1.391675	100.00
43	Edison	34023	14131	0.859564	0.859554	100.00
44	Edison	34023	14132	0.412493	0.412493	100.00
45	Edison	34023	15021	0.435023	0.435023	100.00
46	Edison	34023	15022	0.329788	0.238563	72.34
47	Edison	34023	15023	0.259297	0.007955	2.96
48	Edison	34023	15031	1.949073	1.401843	71.92
49	Edison	34023	15041	0.347056	0.347056	100.00
50	Edison	34023	15042	0.570033	0.570033	100.00
51	Edison	34023	15043	0.479237	0.479237	100.00
52	Edison	34023	17011	0.705354	0.150368	21.29
53	Edison	34023	17012	0.403105	0.180585	44.82
54	Edison	34023	17013	0.280794	0.099503	35.47
55	Edison	34023	19011	0.808208	0.031345	3.88

104 Metuchen	34023 21011	0.099284	0.099284	100.00
105 Metuchen	34023 21012	0.203752	0.203752	100.00
106 Metuchen	34023 21013	0.159599	0.159599	100.00
107 Metuchen	34023 21021	0.283714	0.283714	100.00
108 Metuchen	34023 21022	0.099205	0.019950	20.12
109 Metuchen	34023 21023	0.074459	0.062958	84.55
110 Metuchen	34023 21024	0.139103	0.047980	34.49
111 Metuchen	34023 21025	0.070474	0.012039	17.03
112 North Plainfield	34035 5181	0.131785	0.131785	100.00
113 North Plainfield	34035 5182	0.097749	0.097749	100.00
114 North Plainfield	34035 5183	0.101800	0.101800	100.00
115 North Plainfield	34035 5184	0.253281	0.253281	100.00
115 North Plainfield	34035 5191	0.187725	0.187725	100.00
117 North Plainfield	34035 5192	0.237018	0.237018	100.00
118 North Plainfield	34035 5193	0.145664	0.145664	100.00
119 North Plainfield	34035 5194	0.220588	0.220588	100.00
120 Green Brook	34035 5211	2.441534	1.529729	62.55
121 Green Brook	34035 5212	0.193889	0.193889	100.00
122 Green Brook	34035 5213	0.297151	0.264583	89.04
123 Green Brook	34035 5214	1.591985	0.075355	4.51
124 Watchung	34035 5232	2.704058	0.034798	1.29
125 Watchung	34035 5233	0.428537	0.029575	5.90
125 Watchung	34035 5234	1.195355	0.004131	0.35
127 North Plainfield	34035 517981	0.072042	0.072042	100.00
128 North Plainfield	34035 517982	0.091758	0.091758	100.00
129 North Plainfield	34035 517983	0.081440	0.081440	100.00
130 North Plainfield	34035 517984	0.094715	0.094715	100.00
131 North Plainfield	34035 520021	0.165273	0.131066	79.30
132 North Plainfield	34035 520022	0.255334	0.256334	100.00
133 North Plainfield	34035 520981	0.276111	0.123051	44.57
134 North Plainfield	34035 520982	0.178535	0.178535	100.00
135 North Plainfield	34035 520983	0.115625	0.115625	100.00
136 Clark	34039 3635	0.641185	0.170516	26.59
137 Scotch Plains	34039 3853	0.496479	0.086845	17.49
138 Scotch Plains	34039 3865	0.921772	0.162582	17.55
139 Scotch Plains	34039 3857	0.788086	0.788086	100.00
140 Scotch Plains	34039 3869	2.410677	1.965908	81.55
141 Fanwood	34039 3875	0.159930	0.000577	0.36
142 Plainfield	34039 3882	0.143387	0.007314	5.10
143 Plainfield	34039 3883	0.120408	0.033401	27.74
144 Plainfield	34039 3884	0.210831	0.112871	53.54
145 Plainfield	34039 3891	0.067758	0.067758	100.00
145 Plainfield	34039 3892	0.057561	0.057561	100.00
147 Plainfield	34039 3893	0.109748	0.108324	98.70
148 Plainfield	34039 3894	0.180402	0.152429	90.04
149 Plainfield	34039 3901	0.125232	0.125232	100.00
150 Plainfield	34039 3902	0.122234	0.122234	100.00
151 Plainfield	34039 3903	0.091293	0.091293	100.00
152 Plainfield	34039 3904	0.050795	0.050795	100.00
153 Plainfield	34039 3911	0.315648	0.292577	92.72
154 Plainfield	34039 3912	0.118108	0.118108	100.00
155 Plainfield	34039 3913	0.240607	0.240507	100.00
155 Plainfield	34039 3914	0.168900	0.158900	100.00
157 Plainfield	34039 3921	0.174157	0.174157	100.00
158 Plainfield	34039 3922	0.169252	0.169252	100.00

Order Supplier Electronics, Inc.
 South Plainfield, NJ

169 Plainfield	34039 3923	0.039554	0.089554	100.00
160 Plainfield	34039 3924	0.060334	0.060334	100.00
161 Plainfield	34039 3931	0.071207	0.071207	100.00
162 Plainfield	34039 3932	0.058060	0.068050	100.00
163 Plainfield	34039 3933	0.064951	0.064951	100.00
164 Plainfield	34039 3934	0.139103	0.139103	100.00
165 Plainfield	34039 3941	0.144464	0.144464	100.00
165 Plainfield	34039 3942	0.242071	0.242071	100.00
167 Plainfield	34039 3943	0.254321	0.264321	100.00
168 Plainfield	34039 3951	0.140158	0.140158	100.00
169 Plainfield	34039 3952	0.080287	0.080287	100.00
170 Plainfield	34039 3953	0.137522	0.137522	100.00
171 Plainfield	34039 3954	0.131777	0.131777	100.00
172 Plainfield	34039 3955	0.082199	0.082199	100.00
173 Plainfield	34039 3961	0.223574	0.223574	100.00
174 Plainfield	34039 3962	0.195508	0.195508	100.00
175 Plainfield	34039 3953	0.173954	0.173954	100.00
175 Plainfield	34039 3971	0.284007	0.284007	100.00
177 Plainfield	34039 3972	0.214372	0.214372	100.00
178 Plainfield	34039 3973	0.318198	0.318198	100.00
179 Plainfield	34039 3974	0.168157	0.168157	100.00
180 Plainfield	34039 3983	0.004646	0.004646	100.00
181 Plainfield	34039 3993	0.001970	0.001970	100.00
182 South Plainfield	34023 10023	0.920050	0.920060	100.00
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Totals:		59.091507	50.270470	

For Radius of 3 Mi., Circle Area = 28.274334

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
2	Middlesex	34023 22	0.519439	0.002769	0.53
5	Dunellen	34023 31	0.151859	0.131981	81.54
6	Dunellen	34023 32	0.197137	0.084479	42.85
7	Dunellen	34023 33	0.204356	0.026266	12.85
8	Dunellen	34023 34	0.082426	0.082214	99.74
9	Dunellen	34023 35	0.218639	0.218539	100.00
10	Dunellen	34023 35	0.143215	0.143215	100.00
15	Metuchen	34023 201	0.282289	0.055420	19.53
15	Metuchen	34023 202	0.350493	0.259559	72.00
17	Metuchen	34023 203	0.285831	0.022586	7.90
22	Piscataway	34023 4011	0.331425	0.283867	85.65
23	Piscataway	34023 4012	0.247431	0.103154	41.69
24	Piscataway	34023 4013	0.259538	0.132885	51.20
26	Piscataway	34023 4032	0.496221	0.009017	1.82
27	Piscataway	34023 4041	0.112094	0.112094	100.00
28	Piscataway	34023 4042	0.123470	0.123470	100.00
29	Piscataway	34023 4043	0.437060	0.437060	100.00
30	Piscataway	34023 4044	0.254274	0.213012	83.77
31	Piscataway	34023 5011	0.179553	0.179553	100.00
32	Piscataway	34023 5012	0.310163	0.310163	100.00
33	Piscataway	34023 5013	0.452055	0.452055	100.00

Small Supplier Electronics, Inc.
 Local Materials, NJ

34 Piscataway	34023 5021	0.555172	0.555172	100.00
35 Piscataway	34023 5022	0.353842	0.353842	100.00
36 Piscataway	34023 5031	1.149944	0.161222	4.02
37 Piscataway	34023 5032	2.847483	1.722575	50.50
41 Piscataway	34023 5051	0.561330	0.458913	83.54
42 Piscataway	34023 5062	1.377090	0.695319	50.49
43 South Plainfield	34023 8011	0.093591	0.093591	100.00
44 South Plainfield	34023 8012	0.235293	0.235293	100.00
45 South Plainfield	34023 8013	0.221529	0.221529	100.00
46 South Plainfield	34023 8014	0.141593	0.141593	100.00
47 South Plainfield	34023 8021	0.287524	0.287524	100.00
48 South Plainfield	34023 8022	0.350484	0.350484	100.00
49 South Plainfield	34023 9011	0.191719	0.191719	100.00
50 South Plainfield	34023 9012	0.381414	0.381414	100.00
51 South Plainfield	34023 9021	0.155084	0.155084	100.00
52 South Plainfield	34023 9022	0.377789	0.377789	100.00
53 South Plainfield	34023 9023	0.154688	0.164588	100.00
54 South Plainfield	34023 9024	0.186602	0.185602	100.00
55 South Plainfield	34023 9025	0.113750	0.113750	100.00
56 South Plainfield	34023 10011	0.225820	0.226820	100.00
57 South Plainfield	34023 10012	0.459810	0.459810	100.00
58 South Plainfield	34023 10021	0.531125	0.531125	100.00
59 South Plainfield	34023 10022	0.176147	0.176147	100.00
61 South Plainfield	34023 10024	0.538539	0.538539	100.00
62 South Plainfield	34023 10025	0.438314	0.438314	100.00
53 South Plainfield	34023 10026	1.124209	1.124209	100.00
54 South Plainfield	34023 10027	0.848255	0.848255	100.00
55 Edison	34023 14051	0.633442	0.633442	100.00
66 Edison	34023 14052	0.157117	0.167117	100.00
57 Edison	34023 14053	0.184623	0.184623	100.00
58 Edison	34023 14054	0.176378	0.176378	100.00
69 Edison	34023 14055	0.239941	0.239941	100.00
70 Edison	34023 14061	0.438845	0.438845	100.00
71 Edison	34023 14052	0.302332	0.302332	100.00
72 Edison	34023 14063	0.497921	0.492059	98.82
73 Edison	34023 14064	0.531001	0.403406	75.97
78 Edison	34023 14081	0.290521	0.011776	4.05
81 Edison	34023 14091	0.334129	0.080599	24.12
83 Edison	34023 14093	0.183559	0.062770	34.20
85 Edison	34023 14102	0.410002	0.094372	23.02
85 Edison	34023 14111	0.377418	0.014670	3.89
89 Edison	34023 14121	0.252843	0.163405	54.53
90 Edison	34023 14122	1.391675	1.391675	100.00
91 Edison	34023 14131	0.859554	0.857176	99.72
92 Edison	34023 14132	0.412493	0.412493	100.00
95 Edison	34023 15031	1.949073	0.227893	11.69
97 Edison	34023 15041	0.347056	0.347056	100.00
98 Edison	34023 15042	0.570033	0.558288	97.94
99 Edison	34023 15043	0.479237	0.206600	43.11
104 Metuchen	34023 21011	0.099284	0.011138	11.22
113 North Plainfield	34035 5182	0.097749	0.000418	0.43
114 North Plainfield	34035 5183	0.101800	0.095308	93.62
115 North Plainfield	34035 5184	0.263281	0.116058	44.08
117 North Plainfield	34035 5192	0.237018	0.181085	75.40
118 North Plainfield	34035 5193	0.145654	0.099252	58.14

120 Green Brook	34035 5211	2.441524	1.037711	1.34
129 North Plainfield	34035 517983	0.081440	0.001689	2.07
130 North Plainfield	34035 517984	0.094716	0.019355	20.44
140 Scotch Plains	34039 3859	2.410677	1.008241	41.82
151 Plainfield	34039 3903	0.091293	0.022339	24.47
152 Plainfield	34039 3904	0.050795	0.038892	76.57
155 Plainfield	34039 3913	0.240507	0.161667	57.19
156 Plainfield	34039 3914	0.168900	0.003491	2.07
157 Plainfield	34039 3921	0.174157	0.095191	54.65
158 Plainfield	34039 3922	0.169252	0.125723	74.87
159 Plainfield	34039 3923	0.089554	0.089030	99.41
150 Plainfield	34039 3924	0.050334	0.060334	100.00
151 Plainfield	34039 3931	0.071207	0.067571	94.89
152 Plainfield	34039 3932	0.058050	0.068060	100.00
163 Plainfield	34039 3933	0.064951	0.064951	100.00
154 Plainfield	34039 3934	0.139103	0.139103	100.00
155 Plainfield	34039 3941	0.144464	0.144464	100.00
155 Plainfield	34039 3942	0.242071	0.242071	100.00
157 Plainfield	34039 3943	0.254321	0.254321	100.00
168 Plainfield	34039 3951	0.140158	0.140158	100.00
169 Plainfield	34039 3952	0.080287	0.080287	100.00
170 Plainfield	34039 3953	0.137522	0.137522	100.00
171 Plainfield	34039 3954	0.131777	0.131777	100.00
172 Plainfield	34039 3955	0.082199	0.082199	100.00
173 Plainfield	34039 3951	0.223574	0.223574	100.00
174 Plainfield	34039 3952	0.195508	0.195508	100.00
175 Plainfield	34039 3953	0.173954	0.173954	100.00
176 Plainfield	34039 3971	0.284007	0.284007	100.00
177 Plainfield	34039 3972	0.214372	0.214372	100.00
178 Plainfield	34039 3973	0.318198	0.318198	100.00
179 Plainfield	34039 3974	0.168167	0.168167	100.00
182 South Plainfield	34023 10023	0.920060	0.920060	100.00
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Totals:		41.854431	28.275154	

For Radius of 2 Mi., Circle Area = 12.566371

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius

31	Piscataway	34023 5011	0.179553	0.159610	94.46
32	Piscataway	34023 5012	0.310153	0.054241	17.49
33	Piscataway	34023 5013	0.452055	0.329733	72.94
34	Piscataway	34023 5021	0.555172	0.529223	95.33
35	Piscataway	34023 5022	0.358842	0.346571	96.58
37	Piscataway	34023 5032	2.847483	0.211331	7.42
43	South Plainfield	34023 8011	0.093591	0.093691	100.00
44	South Plainfield	34023 8012	0.235293	0.235293	100.00
45	South Plainfield	34023 8013	0.221529	0.221529	100.00
46	South Plainfield	34023 8014	0.141593	0.141593	100.00
47	South Plainfield	34023 8021	0.287524	0.287524	100.00
48	South Plainfield	34023 3022	0.350484	0.350484	100.00
49	South Plainfield	34023 9011	0.191719	0.191719	100.00

11 South Plainfield	34023 9012	0.381414	0.381414	100.00
21 South Plainfield	34023 9021	0.155084	0.155084	100.00
31 South Plainfield	34023 9022	0.377739	0.377739	100.00
43 South Plainfield	34023 9023	0.164588	0.164588	100.00
54 South Plainfield	34023 9024	0.136602	0.185502	100.00
65 South Plainfield	34023 9025	0.113750	0.113750	100.00
66 South Plainfield	34023 10011	0.226820	0.226820	100.00
67 South Plainfield	34023 10012	0.459810	0.459810	100.00
63 South Plainfield	34023 10021	0.531125	0.531125	100.00
69 South Plainfield	34023 10022	0.175147	0.175147	100.00
61 South Plainfield	34023 10024	0.538539	0.538539	100.00
62 South Plainfield	34023 10025	0.438314	0.438314	100.00
63 South Plainfield	34023 10025	1.124209	1.124209	100.00
64 South Plainfield	34023 10027	0.848255	0.618353	72.90
65 Edison	34023 14051	0.533442	0.385327	60.83
55 Edison	34023 14052	0.167117	0.167117	100.00
67 Edison	34023 14053	0.184623	0.184623	100.00
68 Edison	34023 14054	0.176378	0.066547	37.73
70 Edison	34023 14061	0.438845	0.404552	92.19
71 Edison	34023 14052	0.302332	0.006080	2.01
72 Edison	34023 14063	0.497921	0.042945	8.53
90 Edison	34023 14122	1.391675	0.799884	57.48
91 Edison	34023 14131	0.859564	0.130979	15.24
92 Edison	34023 14132	0.412493	0.003978	0.95
97 Edison	34023 15041	0.347056	0.006025	1.74
140 Scotch Plains	34039 3869	2.410677	0.004369	0.18
168 Plainfield	34039 3951	0.140158	0.034739	24.79
159 Plainfield	34039 3952	0.080287	0.007756	9.55
173 Plainfield	34039 3961	0.223574	0.108643	48.59
174 Plainfield	34039 3962	0.195508	0.110977	56.75
175 Plainfield	34039 3963	0.173954	0.164686	94.57
177 Plainfield	34039 3972	0.214372	0.088319	41.20
178 Plainfield	34039 3973	0.318198	0.273577	85.98
182 South Plainfield	34023 10023	0.920050	0.920050	100.00
Totals:		22.035879	12.566370	

For Radius of 1 Mi., Circle Area = 3.141593

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
45	South Plainfield	34023 8014	0.141593	0.005050	4.28
47	South Plainfield	34023 8021	0.287524	0.111754	38.87
48	South Plainfield	34023 8022	0.350484	0.332584	94.89
50	South Plainfield	34023 9012	0.381414	0.235444	51.73
52	South Plainfield	34023 9022	0.377739	0.092038	24.35
53	South Plainfield	34023 9023	0.154688	0.154688	100.00
54	South Plainfield	34023 9024	0.186602	0.069953	37.49
57	South Plainfield	34023 10012	0.459810	0.329756	71.72
58	South Plainfield	34023 10021	0.531125	0.302971	57.04
59	South Plainfield	34023 10022	0.175147	0.175147	100.00
51	South Plainfield	34023 10024	0.538539	0.091572	17.02

Turner Dubilier Electronics, Inc.
South Plainfield, NJ

43 South Plainfield	34023 10026	1.124209	0.454766	40.45
182 South Plainfield	34023 10023	0.920060	0.773758	84.10
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Totals:		5.639983	5.141593	

For Radius of .5 Mi., Circle Area = 0.785398

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
48	South Plainfield	34023 8022	0.350484	0.131989	37.56
50	South Plainfield	34023 9012	0.381414	0.010227	2.58
52	South Plainfield	34023 9022	0.377789	0.014134	3.74
53	South Plainfield	34023 9023	0.164688	0.057204	34.73
57	South Plainfield	34023 10012	0.459810	0.069971	15.22
58	South Plainfield	34023 10021	0.531125	0.072496	13.55
59	South Plainfield	34023 10022	0.176147	0.175746	99.77
63	South Plainfield	34023 10026	1.124209	0.042998	3.82
182	South Plainfield	34023 10023	0.920060	0.210635	22.89
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Totals:			4.486726	0.785398	

For Radius of .25 Mi., Circle Area = 0.196350

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
48	South Plainfield	34023 8022	0.350484	0.030203	8.52
53	South Plainfield	34023 9023	0.164688	0.004387	2.56
57	South Plainfield	34023 10012	0.459810	0.011539	2.51
58	South Plainfield	34023 10021	0.531125	0.015587	2.93
59	South Plainfield	34023 10022	0.176147	0.063290	35.93
182	South Plainfield	34023 10023	0.920060	0.071344	7.75
=====			=====	=====	=====
Totals:			2.602314	0.196350	

----- Site Data -----

Population: 133276.22
Households: 54838.34
Drilled Wells: 1851.64
Dug Wells: 195.91
Other Water Sources: 9.00

===== Partial (RING) data =====

----- Within Ring: 4 Mile(s) and 3 Mile(s) -----

Population: 82388.50
Households: 29674.16
Drilled Wells: 817.24
Dug Wells: 88.27
Other Water Sources: 9.00

** Population On Private Wells: 2514.11

----- Within Ring: 3 Mile(s) and 2 Mile(s) -----

Population: 62681.48
Households: 21763.46
Drilled Wells: 510.52
Dug Wells: 42.50
Other Water Sources: 0.00

** Population On Private Wells: 1592.75

----- Within Ring: 2 Mile(s) and 1 Mile(s) -----

Population: 29517.57
Households: 10525.21
Drilled Wells: 399.35
Dug Wells: 51.50
Other Water Sources: 0.00

** Population On Private Wells: 1292.44

----- Within Ring: 1 Mile(s) and .5 Mile(s) -----

Population: 6409.03
Households: 2124.39
Drilled Wells: 97.80
Dug Wells: 3.30
Other Water Sources: 0.00

** Population On Private Wells: 305.00

Core: Jubilee Electronics, Inc.
Cuth: Fairfield, NJ

---- Within Ring: .5 Mile(s) and .25 Mile(s) ----

Population:	1738.38
Households:	574.46
Drilled Wells:	18.50
Dug Wells:	0.34
Other Water Sources:	0.00

** Population On Private Wells: 57.04

---- Within Ring: .25 Mile(s) and 0 Mile(s) ----

Population:	541.06
Households:	176.67
Drilled Wells:	8.22
Dug Wells:	0.00
Other Water Sources:	0.00

** Population On Private Wells: 25.17

REFERENCE NO. 5

To:File	Date:January 31, 1994
From:Andrew Cilbanoff	Project #:8003-306
Subject:Groundwater Apportionment	Site Name:Comell Dubllier Electronics

There are two public water suppliers that draw water from wells located within four miles of the Comell Dubllier Electronics Site: Middlesex Water Company and Elizabethtown Water Company.

Middlesex Water Company

Middlesex Water Company (MWC) utilizes 32 wells in conjunction with a surface water intake and water purchased from the Elizabethtown Water Company to supply potable water to a total population of 209,000 in the communities of South Plainfield, Metuchen, Carteret, Woodbridge, Edison and portions of Clark. Water from the surface water intake also serves via bulk transmission lines the communities of Edison Township, Highland Park, Old Bridge MUA, Marlboro Township MUA and Sayreville. The system is interconnected but set up in such a way that practically all of the water shipped through the bulk transmission lines originates from the surface water intake. The surface water intake accounts for 73.8% of the total system flow for MWC, wells account for 20.1%, and 6.1% is purchased from the Elizabethtown Water Company. Approximately 37.5% of the water obtained at the intake is utilized to supply the bulk transmission lines. The percentage of surface water that is blended with groundwater in the distribution system is therefore 62.5% of 73.8% which equals 46.1%. The percentage of the total system flow that flows within the distribution system excluding the bulk transmission lines is $(46.1\% + 20.1\% + 6.1\%) = 72.3\%$. Groundwater makes up 20.1% of the 72.3% or 27.8% of the flow. The total population on groundwater in the MWC system is therefore $(0.278)(209,000) = 58,102$.

Apportionment Calculation

1 Wellfield No.	2 Wellfield Name	3 No. of wells	4 % of total system flow (1993)	5 % of distribution system flow (Column 4 + 72.3)	6 <u>Population</u> Wellfield (Column 5 + 100 X 209,000)
1	Park Avenue	15	7.3	10.1	21,109
2	Spring Lake	4	3.8	5.3	11,077
3	Maple Avenue	2	1.9	2.6	5,434
4	Sprague Ave. No. 1	1	0.0	0	0
5	Sprague Ave. No. 2	1	1.7	2.3	4,807
6	Tingley Lane North	5	3.4	4.7	9,823
7	Tingley Lane South	<u>4</u>	<u>2.0</u>	2.8	<u>5,852</u>
		32	20.1%		58,102

Wellfield No. 2 is in the 0.5 to 1 mile ring. Wellfield Nos. 1, 3, 4, & 5 are located in the 1-2 mile ring. Wellfield Nos. 6 & 7 are located in the 2-3 mile ring.

Population served in ½-1 mile ring = 11,077

Population served in 1-2 mile ring = $(21,109 + 5,434 + 4,807) = 31,350$

Population served in 2-3 mile ring = $(9,823 + 5,852) = 15,675$

To:File

Date:January 31, 1994

From:Andrew Cilbanoff

Project #:8003-306

Subject:Groundwater Apportionment

Site Name:Comell Dubilier Electronics

Elizabethtown Water Company (EWC)

Many communities within four miles of the site obtain their potable water from the Elizabethtown Water Company (EWC). EWC supplies drinking water to the communities of Somerville, Bridgewater Township, Warren Township, Green Brook, Dunellen, Middlesex Borough, Bound Brook, South Bound Brook, Piscataway and portions of Franklin Township.

The EWC distribution system currently blends water from five surface water intakes with water from 72 operating wells to serve a total population of 507,410. Surface water makes up roughly 85% of the total system flow. The distribution system is completely interconnected and all of the wells within four miles of the site tap the Brunswick Formation. The population served by groundwater is estimated to be 15% of the total population served or 76,412 $[(0.15) \times (507,410)]$. The population served by each well is estimated to be 1,057 $[(76,412) / (72 \text{ wells})]$. There are 21 operating EWC wells within four miles of the Comell Dubilier Site. Two EWC operating wells (serving 2,114 people) are located within the 1-2 mile ring, four wells (serving 4,228 people) are located in the 2-3 mile ring and 15 wells (serving 15,855 people) are located within the 3-4 mile ring.

Summary of Apportionment Calculations

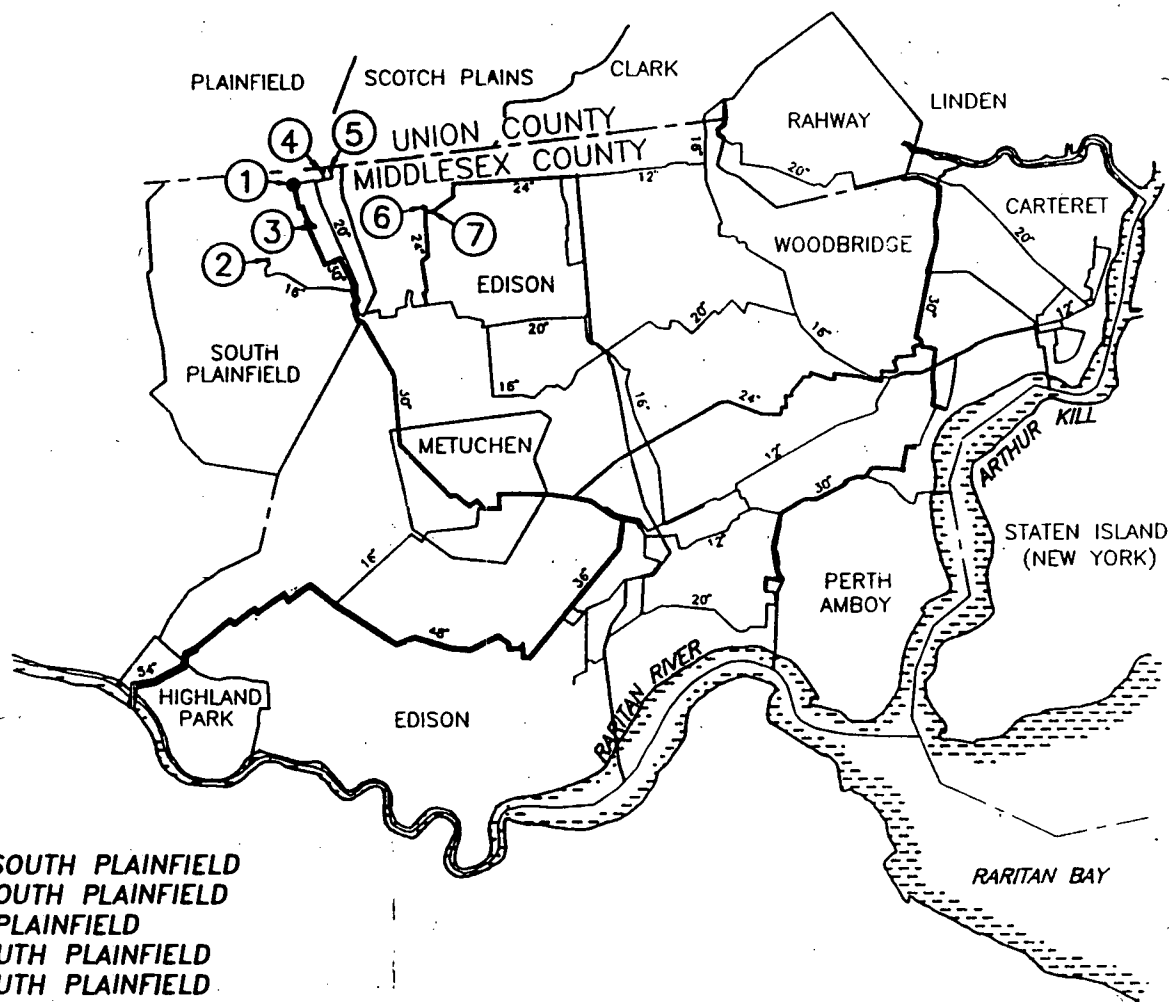
<u>Ring</u> <u>(mi)</u>	<u>Middlesex</u> <u>Water Co.</u>	<u>Elizabethtown</u> <u>Water Company</u>	<u>Total</u> <u>Population</u>
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	11,077	0	11,077
1 - 2	31,350	2,114	33,464
2 - 3	15,675	4,228	19,903
3 - 4	<u>0</u>	<u>15,855</u>	<u>15,855</u>
Total:	58,102	22,197	80,299

Water is also provided via bulk transmission lines to the Township of Edison, the Borough of Highland Park, Old Bridge Municipal Utilities Authority (MUA), the Borough of Sayreville, and the Marlboro Township MUA. However, Mr. Keszler stated that because of the way the distribution system is set up, no significant amount of groundwater is able to reach the bulk transmission lines. Water in the bulk transmission lines consists practically of only surface water. Approximately 37.5% of the water obtained at the intake is supplies the communities which utilized the bulk transmission lines.

OKC



0 1 2 3
SCALE IN MILES
(APPROX.)



KEY NO. DESCRIPTION

- 1 PARK AVENUE WELLFIELD, SOUTH PLAINFIELD
- 2 SPRING LAKE WELLFIELD, SOUTH PLAINFIELD
- 3 MAPLE AVE. WELL, SOUTH PLAINFIELD
- 4 SPRAGUE AVE. WELL #1, SOUTH PLAINFIELD
- 5 SPRAGUE AVE. WELL #2, SOUTH PLAINFIELD
- 6 TINGLEY LANE NORTH WELLFIELD, EDISON
- 7 TINGLEY LANE SOUTH WELLFIELD, EDISON

NO.	DATE	DESCRIPTION	BY	SPD

DRAWN **t**
CHECKED
DRAWN DATE 3-24-82 PRINT DATE 3-24-82
SCALE 4S NOTED



**MIDDLESEX
WATER COMPANY**
1300 BOWEN RD. BORDENHARDE TOWNSHIP
NEW JERSEY 08833-0432

**MIDDLESEX WATER COMPANY
WELLFIELD LOCATIONS**

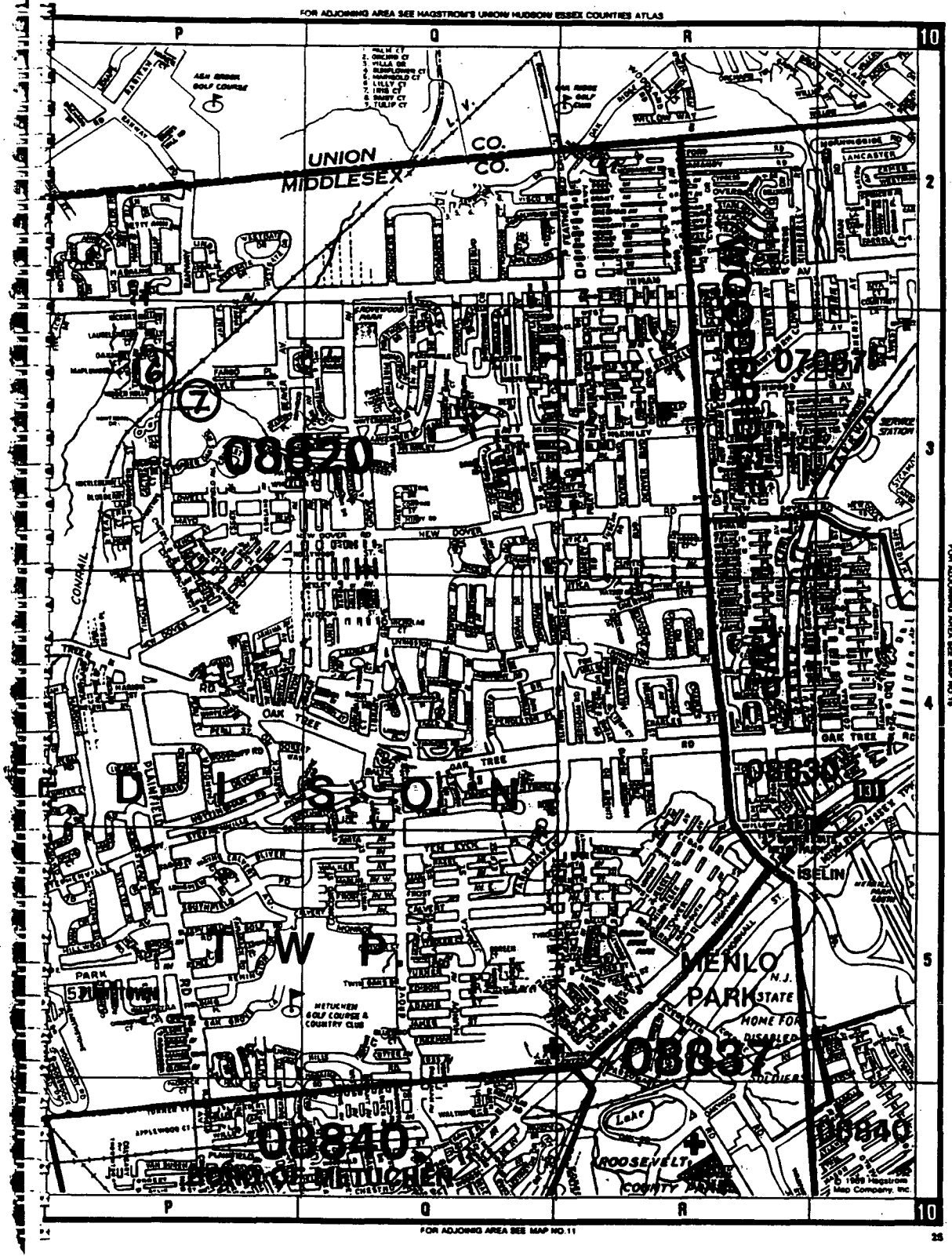
DRAWING NUMBER
MWC/82/014-00
SHEET _____ OF _____

016C



* THE CENTER OF THE CIRCLES REPRESENTS THE APPROXIMATE LOCATION OF EACH WELLFIELD. THE CORRESPONDING #'S CAN BE REFERENCED ON THE ENCLOSED DISTRIBUTION SITE PLAN.

0166



FOR ADJOINING AREA SEE MAP NO. 11

MAPLE AVENUE 2 WELLS DEPTH 351'
421'
BRUNSWICK SHALE AQUIFER

PARK AVENUE. 15 WELLS. DEPTH 73'-0" min
501'-0" max

STRATIFIED
DRIFT. 6 WELLS BETWEEN 73'-100'
BRUNSWICK SHALE 9 WELLS BETWEEN 448'-501'
AQUIFERS

SPRAGUE AVENUE 2 WELLS DEPTH 100'-6"

STRATIFIED DRIFT AQUIFERS

SPRING LAKE. 4 WELLS. DEPTH MAX 504'
MIN 500'

BRUNSWICK AQUIFER

TINGLEY LANE NORTH. 5 WELLS. DEPTH 700' MAX
540' min.

BRUNSWICK AQUIFER

TINGLEY LANE SOUTH 4 WELLS DEPTH MAX 528'
MIN 500 ±
BRUNSWICK AQUIFER



MIDDLESEX
WATER COMPANY
1500 RONSON RD.
ISELIN, NEW JERSEY

PROJECT

WELLFIELD DEPTH
TABLE.

DRAWN BY: J.A.K.

CHECKED BY:

DATE: 3/23/92

SCALE:

0166

WELL NAME:		PUMP CAP. GPM	WELL NAME:		PUMP CAP. GPM
<u>MAPLE AVE.</u>		- 600.	<u>SPRING L.K.</u>		
<u>SPRAGUE</u>			# 5		600
#1		790	6		500
2		790	8		650
			9		350.
<u>PARK AVE.</u>			<u>TINGLEY LANE NORTH.</u>		
* 18		1400	# 1		567
19		1100	2		200
20		1450	3		450.
21		1000.	4		750.
22		320			
23		700	<u>TINGLEY LANE SOUTH</u>		
24		450	# 5		300
25		850	6		400
26		400	7		300
27		350	8		500
28		250	9		300
29		730	THERMAL		200.
30		350			
31		425.			
32		250.			



PROJECT
WELL FLOW DATA

DRAWN BY:	<i>F.A.K.</i>
CHECKED BY:	
DATE:	
SCALE:	

**YEAR ENDED
DECEMBER 31, 1991**

Middlesex Water Company, organized in 1887, is engaged in the business of supplying water for domestic, commercial, industrial and fire protection purposes. Located approximately 30 miles southwest of New York City, the Company supplies water on a retail basis to a population of 800,000 in 5,000 residential, Metuchen, Carteret, Westfield, Edison, the town of Clark, on a wholesale basis to the Township of Edison, the Borough of Highland Park, Old Bridge Municipal Utilities Authority, Borough of Sayreville, Marlboro Township Municipal Utilities Authority (transmission contracts only during 1988 transmission and open sales in 1991) and, under special contract to East Brunswick.

Service Area	55 sq. miles
Mileage in Service	52,358
Hydrameters in Service	4,024
Miles of Main	654
Utility Plant	\$484,547,531
Gross Annual Revenues	\$29,853,248
Taxes	\$7,888,888
Employees	135
Total Payroll	\$4,985,182
Annual Common Dividend (per share)	\$1.92
Earnings per Share -- Common	
Share 1,738,703 Shares	\$2.27
Common Stockholders	1,697
Delivered to Distribution System:	
Total (gallons)	14,571,889,000
Annual Average Daily (gallons)	39,922,984
Maximum Day (gallons)	56,232,880



**MIDDLESEX
WATER COMPANY**

MINI-FACTS

1500 Ronson Road
Iselin, N.J. 08830-0452
(908) 634-1500

Incorporated — 1897

Mr. Sadowski confirmed that EWC currently operates 72 wells in conjunction with five surface water intakes to serve a total population of 507,410 through their interconnected water distribution system. Water from the intakes makes up roughly 85% of the total system flow although no single intake accounts for 40% or more of the total flow.

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. 8003-066

Date: June 4, 1993

Time: 11:10 AM ☐ PM ☐

Incoming Call

From: Richard Sadowski

(908) 654-1234

Telephone No.

Affiliation: Elizabethtown Water Company

Malcolm Pirnie Staff: Andrew Clibanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

Mr. Sadowski returned my call from earlier in the day. I contacted Mr. Sadowski to determine information about Elizabeth Water Company's (EWC) public supply wells that are located within four miles of the Chipman Chemical site. The Mountain Station Wells (2) are located on Mountain Ave. approximately 1/4 of a mile south of Route 22 just east of the Bound Brook/Bridgewater boundary. One of the wells serves as a standby well and has not been used for several years. The second well pumps an average of 20,000 gallons per day and is used to fill a storage tank in the area. The Green Brook well field is located approximately 3.7 miles northeast of the site roughly 1/8 of a mile east of Washington Ave and 1/8 of a mile north of the Somerset Co./Middlesex Co. border in Green Brook. The well field consists of ten wells which all tap into the Brunswick Formation. These wells were out of service due to volatile organic compound (VOC) contamination but are currently in use as an air stripper has been installed to remove the VOCs.

The Elizabethtown Water Company owns a total of 131 supply wells. Of the 131 wells, 59 have been taken out of service because of VOC contamination, leaving 72 wells currently operating. The Elizabethtown Water Company also utilizes water from surface water intakes in the Raritan River, Millstone River, and Delaware and Raritan Canal. Mr. Sadowski recommended that I call Glen Johansen of EWC (same phone number) to obtain more information about the intakes.

**ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT**

File No. 8003-066

Date: June 4, 1993

Time: 11:55 AM ☐ PM ☐

Outgoing Call

To: Glen Johansen

(908) 654-1234

Affiliation: Elizabethtown Water Company

Telephone No.

Malcoln Pirnie Staff: Andrew Clibanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

I phoned Mr. Johansen to obtain information about Elizabethtown Water Company's surface water intakes. Mr. Johansen informed me that EWC operates a total of 5 intakes on three different water bodies. Of the 5 intakes, three draw water from the Raritan River, one draws from the Delaware and Raritan Canal, and one draws from the Millstone River. The Millstone intake is rarely used except in emergency situations. The Canal intake is also infrequently used but is sometimes used to supplement the Raritan intakes. The Raritan Intakes are used all the time and draw an average of 115 MGD total from the Raritan River. All five of the intakes are located in the vicinity of the confluence of the Raritan and Millstone Rivers near Manville.

**ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT**

File No. 8003-066

Date: March 22, 1993

Time: 09:40 AM [X] PM []

Outgoing Call

To: Town Clerk

(908) 356-0833

Affiliation: Green Brook Municipal Building

Telephone No.

Malcolm Pirnie Staff: Andrew Cilbanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

I called the Green Brook town clerk to determine whether or not the town had its own water department. The clerk informed me that Green Brook was served by the Elizabethtown Water Company.

**ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT**

File No. 8003-066

Date: March 22, 1993

Time: 03:05 AM ☐ PM ☒

Outgoing Call

To: Clerk

(908) 562-2390

Affiliation: Piscataway Township Public Works

Telephone No.

Malcolm Pirnie Staff: Andrew Cilbanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

I called the Piscataway Township Public Works to determine whether or not the township had its own water department. The clerk informed me that Piscataway Township was served by the Elizabethtown Water Company.

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. 8003-066

Date: March 22, 1993

Time: 11:30 AM 1X1 PM 11

Outgoing Call

To: Clerk

(908) 753-1223

Telephone No.

Affiliation: Dunellen Public Works

Malcolm Pirnie Staff: Andrew Cilbanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

I called the Dunellen Public Works to determine whether or not the township had its own water department. The clerk informed me that Dunellen's potable water supply is served by the Elizabethtown Water Company.

**ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT**

File No. 8003-066

Date: March 19, 1993

Time: 3:00 AM [] PM [X]

Incoming Call

From: Kevin Sumner

(908) 356-8090

Telephone No.

Affiliation: Borough of Middlesex Board of Health

Malcolm Pirnie Staff: Andrew Clibanoff

(609) 860-0100

Telephone No.

Summary of Conversation:

Mr. Sumner informed me that the Borough of Middlesex receives the majority of its drinking water from the Elizabethtown Water Company. He indicated that it was possible that as much as 10% - 20% of the Middlesex Boro population may obtain potable water from private wells. He also stated that a portion of those people utilizing wells may also be hooked into the Elizabethtown Water Company's system. Mr. Sumner stated that there were no official records on the number of wells currently being used for drinking water purposes in the Borough of Middlesex.

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. 9002-078

Date: 3-23-92

Time: 11:30 ☒ AM ☐ PM

☐ Incoming Call

From: _____

Telephone No. _____

Affiliation: _____

☒ Outgoing Call

To: Mr. Richard Sadowski 908-654-1234

Telephone No. _____

Affiliation: Elizabethtown Water Co.

Malcolm Pirnie Staff: Todd G. Tenyek
(Receiving or Calling) Name

609-860-0100
Telephone No.

Summary of ☒ Conversation ☐ Agreement:

Mr. Sadowski indicated that Elizabethtown Water Co.
has a total of 131 wells and serve approximately
500,000 people

Todd G. Tenyek

Elizabethtown Water Company

INTERCHANGE PLAZA, CRANBURY, NJ 08512-9543
Mailing Address: P.O. Box 1000, Cranbury, NJ 08512-0001

March 9, 1992

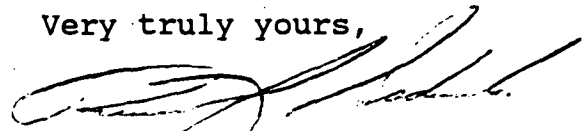
Mr. Todd Teryek
Malcolm Pirnie, Inc.
104 Interchange Plaza
Cranbury, NJ 08512-9543

Dear Mr. Teryek:

In accordance with your request, I am returning your maps for the two CERCLIS sites, Pack Tech Services and Standard Plastic Products, Inc. I've indicated the Elizabethtown wells that are within a 4 mile radius of the sites. Well depth and formation are also included. To determine the population served by these wells is extremely difficult due to the fact that these wells supplement the area; most of the water serving the area is surface water supplied by our main treatment plant in Bridgewater, the Raritan Millstone Plant.

Should you have any questions or require additional information please feel free to call me.

Very truly yours,



Richard A. Sadowski
Superintendent
Wells and Stations

RAS/cll

ELIZABETHTOWN WATER COMPANY WELLS
INDICATED ON FOUR MILE VICINITY MAP

FOR

PACK TECH SERVICES

PISCATAWAY, NJ

	<u>NAME</u>	<u>TOWN</u>	<u>SCREEN DEPTH (ft)</u>	<u>FORMATION</u>
1.	Sebring Mills Well Field	Middlesex		
	Well # 4		300	Brunswick
	Well # 6		412	Brunswick
	Well # 7		285	Brunswick
	Well # 8		430	Brunswick
2.	Green Brook Well Field	Green Brook		
	Well # 1		451	Brunswick
	Well # 2		376	Brunswick
	Well # 3		550	Brunswick
	Well # 4		400	Brunswick
	Well # 5		373	Brunswick
	Well # 6		373	Brunswick
	Well # 7		238	Brunswick
	Well # 8		445	Brunswick
	Well # 9		507	Brunswick
	Well # 11		510	Brunswick
3.	Rock Avenue Well	Green Brook	350	Brunswick
4.	City of Plain- field Well	Plainfield	300	Brunswick
5.	Board of Educa- tion Well	No. Plainfield	311	Brunswick
6.	Rock Avenue Well	Piscataway	350	Brunswick
7.	Rockview Avenue Well	No. Plainfield	400	Brunswick
8.	Fifth Street Well	Plainfield	350	Brunswick
9.	Eighth Street Well	So. Plainfield	350	Brunswick
10.	Clinton Avenue Well	So. Plainfield	350	Brunswick

ELIZABETHTOWN WATER COMPANY WELLS
INDICATED ON FOUR MILE VICINITY MAP

FOR

STANDARD PLASTIC PRODUCTS, INC.

SOUTH PLAINFIELD, NJ

<u>NAME</u>	<u>TOWN</u>	<u>SCREEN DEPTH (ft)</u>	<u>FORMATION</u>
1. Rock Avenue Well	Piscataway	350	Brunswick
2. Clinton Avenue Well	So. Plainfield	350	Brunswick
3. Eighth Street Well	So. Plainfield	350	Brunswick
4. Fifth Street Well	Plainfield	350	Brunswick
5. Green Brook Well	Greenbrook		
Well # 1		451	Brunswick
Well # 2		376	Brunswick
Well # 3		550	Brunswick
Well # 4		400	Brunswick
Well # 5		373	Brunswick
Well # 6		373	Brunswick
Well # 7		238	Brunswick
Well # 8		445	Brunswick
Well # 9		507	Brunswick
Well # 11		510	Brunswick
6. Rock Avenue Well	Green Brook	350	Brunswick
7. City of Plainfield Well	Plainfield	300	Brunswick
8. Board of Education Well	No. Plainfield	311	Brunswick
9. Rockview Avenue	No. Plainfield	400	Brunswick
10. Rockview Terrace Well	No. Plainfield	400	Brunswick
11. Netherwood Well Field	Plainfield		
Well # 1		350	Brunswick
Well # 2		500	Brunswick
Well # 3		350	Brunswick
Well # 4		400	Brunswick
Well # 5		350	Brunswick
Well # 6		300	Brunswick
Well # 7		350	Brunswick
Well # 8		304	Brunswick
Well # 9		350	Brunswick
Well # 10		350	Brunswick
Well # 11		350	Brunswick
Well # 12		352	Brunswick

<u>NAME</u>	<u>TOWN</u>	<u>SCREEN DEPTH (ft)</u>	<u>FORMATION</u>
12. Watchung Avenue Well	Plainfield	605	Brunswick
13. Prospect Avenue Well	Plainfield	350	Brunswick
14. Aberdeen Road Well	Scotch Plains	350	Brunswick

ELIZABETHTOWN WATER COMPANY
WELL LIST

Town	County	Facility Name	Well Depth	Well Permit Number	Effective Date	Formation	Pump Cap. (GPM)	Motor HP	Type
Bound Brook	Somerset	Mountain Sta. #1	366				750	60	Turbine
Bound Brook	Somerset	Mountain Sta. #2	404				356	40	Turbine
Bridgewater	Somerset	Papen Road	225	25-13435	7/12/83	Basalt	220	40	Turbine
Bridgewater	Somerset	Wells Road #1	130	25-5803	7/12/83	Basalt	75	10	Turbine
Bridgewater	Somerset	Wells Road #2	130	25-11512	7/12/83	Basalt	75	10	Turbine
Clark	Union	Elks Well	59	26-4751	7/12/83	Brunswick	300	30	Turbine
Green Brook	Somerset	Green Brook #1	451	45-23	6/7/83	Brunswick	310	25	Turbine
Green Brook	Somerset	Green Brook #2	376	45-24	6/7/83	Brunswick	650	50	Turbine
Green Brook	Somerset	Green Brook #3	550	45-25	6/7/83	Brunswick	60	7.5	Submersible
Green Brook	Somerset	Green Brook #4	400	45-26	6/7/83	Brunswick	350	30	Turbine
Green Brook	Somerset	Green Brook #5	373	25-572	6/7/83	Brunswick	315	25	Turbine
Green Brook	Somerset	Green Brook #6	373	25-632	6/7/83	Brunswick	278	25	Turbine
Green Brook	Somerset	Green Brook #7	238	25-633	6/7/83	Brunswick	179	15	Turbine
Green Brook	Somerset	Green Brook #8	445	25-2715	6/7/83	Brunswick	495	40	Turbine
Green Brook	Somerset	Green Brook #9	507	25-2716	6/7/83	Brunswick	500	50	Turbine
Green Brook	Somerset	Green Brook #11	510	25-2718	6/7/83	Brunswick	340	25	Submersible
Green Brook	Somerset	Rock Avenue	350	25-12665	6/7/83	Brunswick	330	40	Submersible
Kenilworth	Union	Quinton Avenue	502	46-14	7/31/83	Brunswick	185	40	Turbine
Kenilworth	Union	Richfield Avenue	401	46-15	7/31/83	Brunswick	250	30	Turbine
Middlesex	Middlesex	Sebrings Mill #A	300	25-11582	8/17/84	Brunswick	200	25	Submersible
Middlesex	Middlesex	Sebrings Mill #6	412	45-43	8/17/84	Brunswick	400	40	Submersible
Middlesex	Middlesex	Sebrings Mill #7	285	25-11367	8/17/84	Brunswick	300	30	Submersible
Middlesex	Middlesex	Sebrings Mill #8	430	25-13397	8/17/84	Brunswick	200	25	Submersible
Montgomery	Somerset	Montgomery #1	305	28-5407	6/7/83	Stockton	450		Submersible
Montgomery	Somerset	Montgomery #2	335	28-5511	6/7/83	Stockton	450		Submersible
Mountainside	Union	Bristol Road	315	25-9206	6/7/83	Brunswick	330	40	Submersible
Mountainside	Union	Central Avenue	300	25-9083	6/7/83	Brunswick	475	60	Submersible
Mountainside	Union	Charles Street #1	454	25-872	6/7/83	Brunswick	300	40	Submersible
Mountainside	Union	Charles Street #2	572	45-4	6/7/83	Brunswick	150	25	Submersible
N. Plainfield	Somerset	Board of Education	311	45-22	6/7/83	Brunswick	400	50	Turbine
N. Plainfield	Somerset	Rockview Avenue	400	25-13898	6/7/83	Brunswick	300		Submersible
N. Plainfield	Somerset	Rockview Terrace	400	25-13106	6/7/83	Brunswick	200	25	Submersible
Piscataway	Middlesex	Rock Avenue	350	25-13248	6/7/83	Brunswick	150	20	Submersible
Plainfield	Union	Fifth Street	350	25-12961	6/7/83	Brunswick	300	40	Submersible
Plainfield	Union	George Street	89	45-21	6/7/83	Brunswick	125	20	Turbine
Plainfield	Union	Netherwood #1	350	45-9	6/7/83	Brunswick	225	20	Turbine
Plainfield	Union	Netherwood #2	500	45-10	6/7/83	Brunswick	225	20	Turbine
Plainfield	Union	Netherwood #3	350	45-11	6/7/83	Brunswick	600	25	Submersible
Plainfield	Union	Netherwood #4	400	45-12	6/7/83	Brunswick	400	15	Turbine
Plainfield	Union	Netherwood #5	350	45-13	6/7/83	Brunswick	300	15	Submersible
Plainfield	Union	Netherwood #6	300	45-14	6/7/83	Brunswick	325	20	Turbine
Plainfield	Union	Netherwood #7	350	45-15	6/7/83	Brunswick	350	25	Submersible
Plainfield	Union	Netherwood #8	304	45-16	6/7/83	Brunswick	300	25	Submersible
Plainfield	Union	Netherwood #9	350	45-17	6/7/83	Brunswick	300	30	Submersible
Plainfield	Union	Netherwood #10	350	45-18	6/7/83	Brunswick	300	25	Submersible
Plainfield	Union	Netherwood #11	350	45-19	6/7/83	Brunswick	250	20	Submersible
Plainfield	Union	Netherwood #12	352	45-20	6/7/83	Brunswick	250		Turbine
Plainfield	Union	City of Plainfield	300	45-27	6/7/83	Brunswick	400	50	Turbine
Plainfield	Union	Prospect Avenue	350	25-9037	6/7/83	Brunswick	300	40	Submersible
Plainfield	Union	Watchung Avenue	605	25-8185	6/7/83	Brunswick	280	30	Submersible
Plainsboro	Middlesex	Plainsboro #1	120	28-9278	7/12/83	Raritan	350		Turbine
Plainsboro	Middlesex	Plainsboro #2	208	28-11477	7/12/83	Raritan	295		Turbine
Princeton	Mercer	Edgerstoune		28-5000	7/12/83	Stockton	125		Turbine

Town	County	Facility Name	Well Depth	Well Permit Number	Effective Date	Formation	Pump Cap. (GPH)	Motor HP	Type
Princeton	Mercer	Grover Avenue	439	28-2607	7/12/83	Raritan	100		Turbine
Princeton	Mercer	Harrison Street #1	503	48-5	7/12/83	Stockton	100	20	Submersible
Princeton	Mercer	Harrison Street #3	301	28-4371	7/12/83	Stockton	100	65	Turbine
Princeton	Mercer	Harrison Street #4	302	48-6	7/12/83	Stockton	100	20	Turbine
Princeton	Mercer	Harrison Street #5	320	48-7	7/12/83	Stockton	150	20	Turbine
Princeton	Mercer	Harrison Street #6	335	28-1886	7/12/83	Stockton	400	50	Turbine
Princeton	Mercer	Harrison Street #7	300	28-4999	7/12/83	Stockton	200	15	Submersible
Princeton	Mercer	Harrison Street #8	347	28-5073	7/12/83	Stockton	400	40	Submersible
Princeton	Mercer	Stony Brook #2	279	48-8	7/12/83	Stockton	300	40	Turbine
Princeton	Mercer	Stony Brook #3	353	48-9	7/12/83	Stockton	500	30	Turbine
Princeton	Mercer	Stony Brook #4	382	48-10	7/12/83	Stockton	300	15	Submersible
Princeton	Mercer	Stony Brook #6	304	48-11	7/12/83	Stockton	450	40	Turbine
Princeton	Mercer	Stony Brook #7	350	48-12	7/12/83	Stockton	600	25	Submersible
Princeton	Mercer	Stony Brook #8	302	48-13	7/12/83	Stockton	600	40	Turbine
Raritan Township	Hunterdon	Maple Glen	355				250	15	Submersible
Roselle	Union	Chandler Avenue	350	26-2393	7/31/83	Brunswick	300	30	Submersible
Roselle	Union	first Avenue	509	26-1696	7/31/83	Brunswick	450	50	Turbine
Roselle	Union	Walburga #1	350	26-2302	7/31/83	Brunswick	200	40	Submersible
Roselle	Union	Walburga #2	348	26-2360	7/31/83	Brunswick	200	60	Submersible
Roselle	Union	Walburga #3	321	26-2412	7/31/83	Brunswick	350	40	Submersible
Roselle	Union	Walburga #4	321	26-2463	7/31/83	Brunswick	300	50	Submersible
Scotch Plains	Union	3-Aberdeen Road	350	25-12631	6/7/83	Brunswick	250	30	Submersible
Scotch Plains	Union	Glenside Avenue	540	25-7173	7/12/83	Brunswick	150	20	Turbine
Scotch Plains	Union	Jerusalem Road #1	650	25-130	7/12/83	Brunswick	275	30	Turbine
Scotch Plains	Union	Jerusalem Road #2	665	25-649	7/12/83	Brunswick	350	30	Turbine
Scotch Plains	Union	Jerusalem Road #3	708	25-800	7/12/83	Brunswick	150	15	Turbine
Scotch Plains	Union	6-Horse Avenue	400	25-9281	7/12/83	Brunswick	295	30	Submersible
South Plainfield	Middlesex	Clinton Avenue	350	25-13354	6/7/83	Brunswick	475	50	Submersible
South Plainfield	Middlesex	Eighth Street	350	25-12632	6/7/83	Brunswick	450	50	Submersible
Springfield	Union	Springfield #1		46-39	7/12/83	Brunswick	50	3	Submersible
Springfield	Union	Springfield #1A		46-40	7/12/83	Brunswick	100	7.5	Turbine
Springfield	Union	Springfield #2					150	7.5	Submersible
Springfield	Union	Springfield #2A		46-41	7/12/83	Brunswick	100	7.5	Turbine
Springfield	Union	Springfield #3		26-4082	7/12/89	Brunswick	300	7.5	Turbine
Springfield	Union	Springfield #4						10	Turbine
Springfield	Union	Springfield #5						10	Turbine
Springfield	Union	Springfield #5A		46-42	7/12/83	Brunswick	75	5	Turbine
Springfield	Union	Springfield #6		26-4082	7/12/83	Brunswick	160	7.5	Submersible
Springfield	Union	Springfield #6A		46-43	7/12/83	Brunswick	300	7.5	
Springfield	Union	Springfield #7		46-44	7/12/83	Brunswick	100		
Springfield	Union	Springfield #7A		46-45	7/12/83	Brunswick	75	7.5	Turbine
Springfield	Union	Springfield #8R		46-46	7/12/83	Brunswick	100	10	Submersible
Springfield	Union	Springfield #9R		46-47	7/12/83	Brunswick	200	7.5	Turbine
Springfield	Union	Springfield #11		46-48	7/12/83	Brunswick	125	7.5	Submersible
Springfield	Union	Springfield #12R							
Springfield	Union	Springfield #17							
Springfield	Union	Springfield #21R		46-50	7/12/83	Brunswick	150	5	Turbine
Springfield	Union	Springfield #23					50	5	Turbine
Springfield	Union	Springfield #24		46-51	7/12/83	Brunswick	60	3	Submersible
Springfield	Union	Springfield #25					100	10	Turbine
Springfield	Union	Springfield #29					100	5	Submersible
Springfield	Union	Springfield #32							
Springfield	Union	Springfield #36		46-52	7/12/83	Brunswick	125	5	Submersible
Springfield	Union	Springfield #41					75	7.5	Submersible
Springfield	Union	Springfield #42		46-53	7/12/83	Brunswick	100	5	Submersible
Springfield	Union	Springfield #43							
Springfield	Union	Springfield #44					50	5	Turbine

Town	County	Facility Name	Well Depth	Well Permit Number	Effective Date	Formation	Pump Cap. (GPM)	Motor HP	Type
Springfield	Union	Springfield #47		46-54	7/12/83	Brunswick	125	5	Submersible
Springfield	Union	Springfield #48		46-55	7/12/83	Brunswick	75	5	Submersible
Springfield	Union	Springfield #50		46-56	7/12/83	Brunswick	50	5	Turbine
Springfield	Union	Springfield #53		46-57	7/12/83	Brunswick	175	7.5	Turbine
Springfield	Union	Springfield #54		46-58	7/12/83	Brunswick	150	7.5	Turbine
Springfield	Union	Springfield #55		46-59	7/12/83	Brunswick	175	7.5	Turbine
Tewksbury	Somerset	Pottersville	400	25-15051	6/7/83	Pre-Cambrian	100	30	Submersible
Union	Union	Hummocks #1	326	46-16	7/12/83	Brunswick	100		
Union	Union	Hummocks #1A	143	46-17	7/12/83	Brunswick	200		
Union	Union	Hummocks #2A	122	46-18	7/12/83	Brunswick	150		
Union	Union	Hummocks #5	91	46-19	7/12/83	Brunswick	200		
Union	Union	Hummocks #5A	126	46-20	7/12/83	Brunswick	100		
Union	Union	Hummocks #4A*	117.5	46-21	7/12/83	Brunswick	70	5	Submersible
Union	Union	Hummocks #5	92	46-22	7/12/83	Brunswick	200		
Union	Union	Hummocks #5A*	128	46-23	7/12/83	Brunswick	100	7.5	Submersible
Union	Union	Hummocks #6AR*	130	46-24	7/12/83	Brunswick	300	20	Turbine
Union	Union	Hummocks #7A*	233	46-25	7/12/83	Brunswick	85	5	Submersible
Union	Union	Hummocks #8A*	114	46-26	7/1/83	Brunswick	200	10	Turbine
Union	Union	Hummocks #9A	126	46-27	7/12/83	Brunswick	150		
Union	Union	Hummocks #10	84	46-27	7/12/83	Brunswick	100		
Union	Union	Hummocks #10A	118	46-29	7/12/83	Brunswick	150		
Union	Union	Hummocks #11A	125	46-30	7/12/83	Brunswick	100		
Union	Union	Hummocks #12A	120	46-31	7/12/83	Brunswick	200		
Union	Union	Hummocks #17*	99.6	46-32	7/12/83	Brunswick	250	15	Submersible
Union	Union	Hummocks #19	455	46-33	7/12/83	Brunswick	100		
Union	Union	Hummocks #23	120	46-34	7/12/83	Brunswick	100		
Union	Union	Hummocks #26		46-35	7/12/83	Brunswick	100		
Union	Union	Hummocks #28	96	46-36	7/12/83	Brunswick	100		
Union	Union	Hummocks #29	92	46-37	7/12/83	Brunswick	100		
Union	Union	Hummocks #41	83	46-38	7/12/83	Brunswick	150		
Union	Union	Hummocks #H2*		26-4830	7/12/83	Brunswick	150		Turbine
Union	Union	Hummocks #H5		26-4926	7/12/83	Brunswick	220		
Union	Union	Hummocks #TB2		26-4808	7/12/83	Brunswick	200		
Union	Union	Hummocks #TB2A		26-4829	7/12/83	Brunswick	400		
Watchung	Somerset	Two Guys #1	325	25-8131	6/7/83	Brunswick	400	40	Submersible
Watchung	Somerset	Two Guys #2	350	25-8132	6/7/83	Brunswick	60	20	Submersible
Westfield	Union	7- Ein Street	525	25-8087	7/12/83	Brunswick	350	40	Submersible
Westfield	Union	8- Prospect Street	500	25-12960	7/12/83	Brunswick	150	20	Submersible
Westfield	Union	9- Westfield Office #1	523	25-873	7/12/83	Brunswick	500	50	Turbine
Westfield	Union	Westfield Office #2	502	45-5	7/12/83	Brunswick	350	40	Turbine
Westfield	Union	Wittke #1	506	25-4639	7/12/83	Brunswick	425	50	Turbine
Westfield	Union	Wittke #2	511	25-5083	7/12/83	Brunswick	525	TS	Turbine
West Windsor	Mercer	Jefferson Park #1	121	28-5368	6/7/83	Raritan	600		Turbine
West Windsor	Mercer	Jefferson Park #2	126	28-6455	6/7/83	Raritan	600		Turbine

*Only wells in service with new V.O.C. facility

SERVICE TO OTHER SYSTEMS --- INFORMATION LIST

Interconn. With:	Drw. No.:	Interconn. Location:	Flow Direction:	Type of Interconn.	Meter Size:	Contracted Consumption:	Contract Expires:	Facility Number:	Book Map:	Contact Personnel:
Edison Twp Water Dept.	1	Talmadge Rd - Edison Twp Line	From	Normal	16" Venturi	4.5 mgd	1/1/98	3518	H-12	1) Matt Bolger 2) Pete Schnattauf (office) 287-0900 3) Police/24 hrs 287-1900
	2	Truman Dr. - Edison Twp Line	From	Normal	20" Venturi	"	"	3516	H-14	
	3	Stelton Rd - Edison Twp Line	From	Emergency	8"	"	"	3517	H-14	
Elizabeth Water Departawnt	4	Norris Avenue	From	Normal	20" Venturi	5.0 mgd	1/1/92	3528	A-5	24 hrs/S20-410S 1) Bill Connelly 2) Roger Kilgore 3) Kevin Glacken
	5	Lidgerwood Avenue	From	Normal	16" Venturi	"	"	3526	A-6	
	6	Westfield - Galloping Hill Rd.	From	Normal	8"	"	"	3534	B-6	
	7	Brunswick Ave. & Allen St.	To	Emergency	8"	"	"	3504	A-7	
	8	Waterfront & Kohler Way	From	Normal	6"	"	"	3532	A-7	
	9	Clay Ave - Galloping Hill Rd.	From	Normal	6"	"	"	3524	B-5	
	10	Salem Ave. - Galloping Hill Rd.	From	Emergency	6"	"	"	3536	A-4	

TERRITORY SERVED DURING YEAR

1. Column (b) should show the estimated permanent population at end of year for area served.
2. If there was a significant change in population for summer months use two lines for the municipality involved indicating "permanent" and "summer".

LINE	NAME OF MUNICIPALITY OR OTHER POLITICAL SUBDIVISION (a)	ESTIMATED PERMANENT POPULATION SERVED (b)	NO. OF CUSTOMERS END OF YEAR (c)	NO. OF FIRE HYDRANTS (d)	FEET OF MAINS		
					TOTAL (e)	ON PUBLIC WAYS (f)	ON PRIVATE RIGHT OF WAY (g)
1	Bedminster	222	74	26	50,055	43,982	6,073
2	Bound Brook	8,085	2,695	132	140,551	129,103	11,448
3	Branchburg	6,711	2,237	325	273,127	258,748	14,378
4	Bridgewater	22,785	7,595	857	888,612	729,152	160,460
5	Clark	14,739	4,913	320	338,599	303,148	35,451
6	Cheater	57	19	7	8,634	8,634	---
7	Cranbury	12	4	50	48,736	41,683	7,053
8	Cranford	22,779	7,593	447	438,551	424,155	14,396
9	Dunellen	6,480	2,160	104	101,935	100,564	1,371
10	Edison	3,735	1,245	171	164,521	110,792	53,729
11	Elizabeth	---	---	---	239	239	---
12	Fanwood	7,626	2,542	142	137,760	152,614	5,146
13	Flomington	---	---	---	3,220	3,220	---
14	Franklin	675	225	28	53,570	51,719	1,851
15	Garwood	4,623	1,541	86	68,878	66,771	2,107
16	Greenbrook	3,726	1,242	136	150,171	136,437	13,734
17	Hillsborough	18,291	6,097	737	634,816	484,527	150,289
18	Hillside	18,660	6,020	---	285,211	275,780	9,431
19	Kenilworth	9,341	3,047	166	175,922	163,942	11,980
20	Lawrence	3,489	1,163	133	128,912	88,285	40,627
21	Linden	34,239	11,413	22	719,392	619,014	100,376
22	Middlesex	12,807	4,269	274	299,313	276,929	22,384
23	Millstone	234	78	11	11,143	11,143	---
24	Montgomery	3,855	1,285	286	269,904	220,206	49,628
25	Mountainside	7,599	2,511	206	744,046	222,265	16,281
26	Passaic	---	---	---	348	348	---
27	Pearl River	2,016	672	99	91,274	86,579	4,695
28	North Plainfield	14,868	4,956	310	272,102	255,543	16,559
29	Piscataway	29,133	9,711	707	916,946	807,846	109,100
30	Plainfield	31,464	10,488	657	576,114	564,313	11,801
31	Plainsboro	6,801	2,267	289	288,093	147,943	140,150
32	Princeton Borough	7,212	2,404	278	173,048	148,230	24,818
33	Princeton Township	12,549	4,183	403	516,856	448,762	68,094
34	Rahway	---	---	---	12,062	7,188	4,874
35	Raritan Borough	5,976	1,992	101	133,280	125,741	7,539
36	Raritan Township	6,978	2,326	207	198,256	153,803	44,453
37	Total Summer Population Only						
	Total (Do not include summer population)						

TERRITORY SERVED DURING YEAR

- Column (b) should show the estimated permanent population at end of year for area served.
- If there was a significant change in population for summer months see the lines for the municipality involved indicating "permanent" and "summer".

LINE NO.	NAME OF MUNICIPALITY OR OTHER POLITICAL SUBDIVISION (a)	ESTIMATED PERMANENT POPULATION SERVED (b)	NO. OF CUSTOMERS END OF YEAR (c)	NO. OF FIRE HYDRANTS (d)	FEET OF MAINS		
					TOTAL (e)	ON PUBLIC WAYS (f)	ON PRIVATE RIGHT OF WAY (g)
1	Readington	1,083	361	59	62,783	45,013	17,770
2	Roselle	16,146	5,382	338	256,407	250,675	5,732
3	Roselle Park	10,374	3,458	153	170,513	167,638	2,875
4	Reynolds Plains	20,850	6,950	414	548,370	503,141	45,229
5	Somerville	10,419	3,473	180	238,122	194,817	43,305
6	South Bound Brook	3,606	1,202	68	63,779	58,741	5,038
7	South Brunswick	382	194	4	18,797	14,650	4,147
8	South Plainfield	10,789	3,595	341	361,007	316,610	44,397
9	Springfield	---	---	8	10,338	2,613	7,725
10	Tewksbury	312	104	5	11,850	11,232	618
11	Union	49,512	16,504	19	909,836	861,251	48,585
12	Warren	5,751	1,917	353	330,380	316,078	14,302
13	Watchung	3,688	1,233	239	284,569	187,657	16,912
14	Westfield	29,256	9,752	691	624,592	605,562	19,030
15	West Windsor	13,071	4,357	603	593,088	526,290	66,798
16	Woodbridge	---	---	4	19,784	14,594	5,199
17	Manville	---	---	---	12,948	8,776	4,172
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
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29							
30							
31							
32							
33							
34							
35							
36							
37	Total Summer Population Only	
		502,413	167,471	11,196	13,272,360	11,760,186	1,512,174

NOTE: This does not include summer population

REFERENCE NO. 6

To:File

Date:February 8, 1994

From:Andrew Cilbanoff

Project #:8003-306

Subject:Surface Water Pathway

Site Name:Comell Dubilier Electronics

The following table characterizes the surface water pathway for the Comell Dubilier Electronics site. The in-stream distances were measured with an opisometer on the Plainfield, Bound Brook and New Brunswick, NJ U.S. Geological Survey (USGS) quadrangles (Ref. Nos. 2; 3). The estimated average annual flow rates were calculated by the staff of the NJ USGS branch office (Ref. No. 7). Wetland frontage was measured with an opisometer on the National Wetlands Inventory maps for the abovementioned quadrangles (Ref. No. 3).

Water Body	In-Stream Distance (Miles)	Avg. Annual Flow Rate (CFS)	Wetland Frontage (Miles)
Bound Brook	2.2	11	1.85
New Market Pond	0.8	11	0.14
Bound Brook	3.2	11	2.98
Green Brook	2.5	30	2.30
Raritan River	6.3	1,340	4.80
Total:	15.0		12.07

No surface water intakes are located on any of the water bodies located within the fifteen-mile surface water pathway target distance limit (Ref. No. 8).

REFERENCE NO. 7

Water Body	Average Annual Flow Rate (CFS)
Bound Brook	11
Green Brook	30
Raritan River	1,340

REFERENCE NO. 8

SURFACE WATER INTAKE LOCATIONS

BUREAU OF SAFE DRINKING WATER

Prepared by: Michael Mariano

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER
MARCH 1932

PWSID	FORWATER NAME	PHONE NUMBER	CITY OR MUNICIPALITY	INTAKE LOCATION
0102001	ATLANTIC CITY WATER DEPARTMENT	609-345-3315	ABESCON	DOUGHTY POND - South tip - Hays Landing Rd. & Hill Rd.
0238001	HACKENSACK WATER DEPARTMENT	201-767-9300	PARAMUS	SASONE RIVER - South of intersection of Paramus Rd. & Midland Ave.
			ORADELL	HACKENSACK RIVER - At Easton Ave.
			NORTETALE	SPARK HILL CREEK - Northwest of intersection of Pegasus Ave. & Hill Terr.
			ORADELL	LONG SWAMP BROOK - At Hartia Ave.
0308001	BERKINGTON CITY WATER DEPARTMENT	609-386-0307	EAST BERKINGTON	DELAWARE RIVER - 1/4 mile north of Amiscank Creek
			BERKINGTON ISLANDS	BERKINGTON ISLAND LAKE
0328001	FORT OIL	689-642-5040		HANCOCKS CREEK
1813001	NJWSC	201-878-0225	POMPTON LAKE	KAHAPO RIVER - At Pompton Lake (pump to Vauxsque Res.)
			VAUXSQUE	VAUXSQUE RESERVOIR - Aingwood Ave & Oricchio Ave
0717001	CITY OF ORANGE	201-782-6000	SOUTH ORANGE	ORANGE RESERVOIR - On West branch of Rahway River 40 ft upstream from dam

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER
MARCH 1992

PWSID#	PURVEYOR NAME	PHONE NUMBER	INTAKE MUNICIPALITY	INTAKE LOCATION
0712001	NJ AMERICAN NORTHERN DISTRICT	201-376-8800	MILLEBURN	PASSAIC RIVER - At Kennedy Parkway
			SHORT HILLS	CANOE BROOK - North of Route 24
			CALDWELL	POMPTON RIVER - At Bridges Rd.
0714001	NEWARK WATER DEPT	201-256-4965		PEQUANNOCK WATER SEED
0906001	JERSEY CITY WATER DEPARTMENT	201-547-4390	BOONTON	BOONTON RESERVOIR - 200 rds northwest of Washington St Bridge
			ROCKAWAY	SPLIT ROCK RESERVOIR - Reptiles into Boonton Res. via Rockaway River
1017001	LANESENVILLE WATER DEPARTMENT	608-397-0886	LAMBLATVILLE	SLAN CREEK RESERVOIR EAST
			LANESENVILLE	SLAN CREEK RESERVOIR WEST
			LANESENVILLE	DELAWARE-RARITAN CANAL - At Swan St. (Emergency)
1111001	CITY OF TRENTON	608-989-3208	TRENTON	DELAWARE RIVER - At Rt 29 north of Calhoun St. Bridge
1216001	PETER ABBOT	908-826-0290	OLD BRIDGE	TENNENTS POND - At Waterworks Rd.
1228001	MIDDLESEX WATER CO	908-634-1800	EDISON	DELAWARE-RARITAN CANAL & MILLSTONE RIVER - At Rt 18

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER
MARCH 1992

PWSID#	PURVEYOR NAME	PHONE NUMBER	INTAKE MUNICIPALITY	INTAKE LOCATION
1214001	NEW BRUNSWICK WATER DEPARTMENT	908-745-5060	NEW BRUNSWICK	LAWRENCE BROOK - At Burnet St.
			NEW BRUNSWICK	DELAWARE-RARITAN CANAL - At George St & College Ave
1214001	NORTH BRUNSWICK	908-247-0922	FRANKLIN TWP	DELAWARE-RARITAN CANAL - At Saydoo Ave.
1219001	SAYREVILLE	908-390-7000	OLD BRIDGE	SODDY RIVER - At Main St North of Rt 18
1352005	NEW JERSEY WATER SUPPLY AUTH.		WALL TWP	MANASQUAN RIVER - Hospital Rd. North of Garden State Parkway (Pump to Manasquan Reservoir)
1346001	N.J. AMERICAS - MONTICELLO		WALL TWP	MANASQUAN RIVER - Hospital Rd. North of GSP (Pump to Gleadola Reservoir)
			NEPTUNE TWP	SEAR RIVER - Off Corlies Ave. 2000' North of GSP
			NEPTUNE TWP	JUMPING BROOK - At Greengrove & Corlies Aves
			LINCROFT	SWIMMING RIVER RESERVOIR - 1000' West of Swimming Riv.
1326004	MATCHAPONIM		MANALAPAN	MATCHAPONIM BROOK - At Wilson Ave.
1401081	TOWN OF BOONTON	201-299-7740	MONTVILLE	TAYLORTOWN RESERVOIR - At Taylortown Rd.

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER
MARCH 1992

PWSID#	PURVEYOR NAME	PHONE NUMBER	INTAKE MUNICIPALITY	INTAKE LOCATION
1403001	BUTLER WATER DEPT	201-838-7200	BUTLER	WINEBOUT RESERVOIR - At Resevior Rd.
1424001	SOOTH EAST MORRIS COUNTY	201-638-6600	MORRIS	CLYDE POTTS RESERVOIR - Cold Hill Rd & Woodland Rd
1506001	BRICK TWP	908-458-7000		NETEDECONK RIVER
1603001	HALEDON WATER DEPT		HALEDON	HALEBOON RESERVOIR - Lower Basia pump station at Belmont Ave.
1605002	PASSAIC VALLEY WATER COMMISSION	201-256-1566	WAYNE	POMPTON RIVER - At Confluence of Raapo & Pequannock Rivers
			TOTOVA	PASSAIC RIVER - At Onion Blvd.
1708300	E.H. DUPONT PENTON	609-299-5000		SALEN CANAL
1712001	SALEN WATER DEPT	609-935-0350	CLINTON TWP	LEONER LAKE - At Waterworks Rd & Lake Ave.
			ALLOWAT TWP	ELMANTON HILL POND - Waterworks Rd. 3 miles east of Laurel Lake (Seasonal)
1903001	BRANCHVILLE WATER DEPARTMENT	201-948-8463	FRANKFORD TWP	BRANCHVILLE RESERVOIR - 7300' northeast of Mattison Ave & Mattison School Rd.
1908002	FRANKLIN WATER DEPT	201-827-7060	FRANKLIN BOROUGH	FRANKLIN POND - Franklin Ave. Across from plant
1915001	HEWTON WATER DEPT	201-383-3521	SPARTA TWP	MORRIS LAKE

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER
MARCH 1992

PWSID#	PORTRYOR NAME	PHONE NUMBER	INTAKE MUNICIPALITY	INTAKE LOCATION
1921001	SUSSEX WATER DEPT	201-967-5622	VANTAGE TWP	COLESVILLE RESERVOIR - At Brink Rd. 400' west of Rt. 23
2013001	RAHWAY WATER DEPT	201-388-0086	RAHWAY	RAHWAY RIVER - At pump station off Talley Rd A Lambert St.
2004002	BLIZABETHSTOWN WATER COMPANY	201-345-4444	BRIDGEWATER TWP	RAHITAN & MILLSTONE RIVERS - At confluence
2108001	HACKETTSTOWN NUA	201-852-3622	DRAKESTOWN	NINE HILL RESERVOIR - Off Nine Hill Rd.
			DRAKESTOWN	BOND RESERVOIR - Off Reservoir Rd. Southeast of

0

REFERENCE NO. 9

Let's protect our earth



Surface Water Quality Standards

N.J.A.C. 7:9-4.1 et seq.



AUGUST 1989

New Jersey Department of Environmental Protection
Division of Water Resources

1. It is demonstrated to the satisfaction of the Department that the waters should be set aside to represent the natural aquatic environment and its associated biota; or
 2. It is demonstrated to the satisfaction of the Department that a more restrictive use is necessary to protect a unique ecological system or threatened/endangered species.
- (g) In those cases in which a thermal discharge is involved, the procedures for reclassifying segments for more restrictive uses shall be consistent with section 316 of the Federal Clean Water Act.

7:9-4.12 Designated uses of FW1, PL, FW2, SE1, SE2, SE3, and SC Waters

- (a) In all FW1 waters the designated uses are:
1. Set aside for posterity to represent the natural aquatic environment and its associated biota;
 2. Primary and secondary contact recreation;
 3. Maintenance, migration and propagation of the natural and established aquatic biota; and
 4. Any other reasonable uses.
- (b) In all PL waters the designated uses are:
1. Cranberry bog water supply and other agricultural uses;
 2. Maintenance, migration and propagation of the natural and established biota indigenous to this unique ecological system;
 3. Public potable water supply after such treatment as required by law or regulations;
 4. Primary and secondary contact recreation; and
 5. Any other reasonable uses.
- (c) In all FW2 waters the designated uses are:
1. Maintenance, migration and propagation of the natural and established biota;
 2. Primary and secondary contact recreation;
 3. Industrial and agricultural water supply;

4. Public potable water supply after such treatment as required by law or regulation; and
 5. Any other reasonable uses.
- (d) In all SE1 waters the designated uses are:
1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
 2. Maintenance, migration and propagation of the natural and established biota;
 3. Primary and secondary contact recreation; and
 4. Any other reasonable uses.
- (e) In all SE2 waters the designated uses are:
1. Maintenance, migration and propagation of the natural and established biota;
 2. Migration of diadromous fish;
 3. Maintenance of wildlife;
 4. Secondary contact recreation; and
 5. Any other reasonable uses.
- (f) In all SE3 waters the designated uses are:
1. Secondary contact recreation;
 2. Maintenance and migration of fish populations;
 3. Migration of diadromous fish;
 4. Maintenance of wildlife; and
 5. Any other reasonable uses.
- (g) In all SC waters the designated uses are:
1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
 2. Primary and secondary contact recreation;
 3. Maintenance, migration and propagation of the natural and established biota; and
 4. Any other reasonable uses.

(f) The surface water classifications in Table 4 are for waters of the Raritan River and Raritan Bay Basin:

TABLE 4

<u>WATERBODY</u>	<u>CLASSIFICATION</u>
ALLERTON CREEK (Allerton) - Entire length	FW2-NT
AMBROSE BROOK (Piscataway) - Entire length	FW2-NT
AMWELL LAKE (Syndertown)	FW2-NT(C1)
ASSISCONG CREEK (Flemington) - Entire length	FW2-NT
BACK BROOK (Vanliew's Corners) - Entire length	FW2-NT
BALDWINS CREEK (Pennington) - Entire length, except segment described separately below	FW2-NT
(Baldwin) - Segment within the boundaries of Baldwin Lake Wildlife Management Area	FW2-NT(C1)
BARCLAY BROOK (Redshaw Corners) - Entire length	FW2-NT
BEAVER BROOK (Cokesbury) - Source to Reformatory Road bridge	FW2-TP(C1)
(Annandale) - Reformatory Rd. bridge to Raritan River, South Branch	FW2-TM
BEDEN BROOK (Montgomery) - Entire length	FW2-NT
BIG BEAR BROOK (West Windsor) - Entire length	FW2-NT
BIG BROOK (Vanderberg) - Entire length	FW2-NT
BLACK BROOK (Polktown) - Entire length	FW2-TP(C1)
BLACK RIVER - See LAMINGTON RIVER	
BLACKBERRY CREEK (Oceanport) - Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport.	SE1
(Oceanport) - Creek below the line described above	SE1
BLUE BROOK (Mountainside) - Entire length	FW2-NT
BOULDER HILL BROOK (Tewksbury) - Entire length	FW2-TP(C1)
BOUND BROOK (Dunellen) - Entire length	FW2-NT
BRANCHPORT CREEK (Long Branch) - Source to a line beginning on the northernmost extent of an unnamed point of land lying north of Pocano Ave. in Oceanport and bearing approximately 055 degrees True North to its terminus on the westernmost extent of the northern bulkhead at the lagoon located between France Rd. and	FW2-NT/SE1

Oceanport (Oceanport) - Creek downstream of line described above	SE1(C1)
PARKERS CREEK	
(Fort Monmouth) - Source to a line beginning on the easternmost extent of Horseneck Point and bearing approximately 000 degrees T (True North) to its terminus on Breezy Point on the Little Silver side (north) side of the creek.	FW2-NT/SE1
(Fort Monmouth) - Creek downstream of line described above	SE1(C1)
PEAPACK BROOK (Gladstone) - Entire length	FW2-TP(C1)
PETERS BROOK (Somerville) - Entire length	FW2-NT
PIGEON SWAMP (S. Brunswick) - All waters within the boundaries of Pigeon Swamp State Park	FW2-NT(C1)
PIKE RUN (Belle Meade) - Entire length	FW2-NT
PINE BROOK (Clarks Mills) - Entire length	FW2-NT
PINE BROOK (Cooks Mill) - Entire length	FW2-TM
PLEASANT RUN (Readington) - Entire length	FW2-NT
PRESCOTT BROOK (Stanton Station) - Entire length	FW2-TM
RAMANESSIN (HOP) BROOK (Holmdel) - Entire length	FW2-TM
RARITAN BAY - Entire drainage	FW2-NT/SE1
RARITAN RIVER	
NORTH BRANCH (Also see INDIA BROOK) (Pleasant Valley) - Source to, but not including, Ravine Lake	FW2-TP(C1)
(Far Hills) - Ravine Lake dam to Rt. 512 bridge	FW2-TM
(Bedminster) - Rt. 512 bridge to confluence with South Branch, Raritan River	FW2-NT
SOUTH BRANCH RARITAN RIVER	
(Mt. Olive) - Source to the dam that is 390 feet upstream of the Flanders- Drakestown Road bridge	FW2-NT(C1)
(Mt. Olive) - Dam to confluence with Turkey Brook	FW2-TM(C1)
(Naughtright) - Confluence with Turkey Brook to confluence with Electric Brook	FW2-TP(C1)
(Clinton) - Confluence with Electric Brook to downstream end of Packers Island, except segment described separately, below	FW2-TM
(Ken Lockwood Gorge) - River and tributaries within Ken Lockwood Gorge Wildlife Management Area	FW2-TM(C1)
(Neshanic Sta.) - Downstream end of Packers Island to confluence with North Branch, Raritan River	FW2-NT
MAIN STEM RARITAN RIVER	
(Bound Brook) - From confluence of North	FW2-NT

and South Branches to Landing Lane bridge in New Brunswick and all freshwater tributaries downstream of Landing Lane bridge.	
(Sayreville) - Landing Lane bridge to Raritan Bay and all saline water tributaries	SE1
RINEHART BROOK (Hacklebarney) - Entire length	FW2-TP(C1)
ROCK BROOK (Montgomery) - Entire length	FW2-NT
ROCKAWAY CREEK	
NORTH BRANCH	
(Mountainville) - Source to Rt. 523 bridge	FW2-TP(C1)
(Whitehouse) - Rt. 523 bridge to confluence with South Branch	FW2-TM
SOUTH BRANCH (Whitehouse) - Entire length	FW2-TM
MAIN STEM (Whitehouse) - Confluence of North and South Branches to Lamington River	FW2-NT
ROUND VALLEY RESERVOIR (Clinton)	FW2-TM
ROYCE BROOK (Manville) - Entire length	FW2-NT
SHREWSBURY RIVER	
(Little Silver) - Source to Rt. 36 highway bridge	SE1(C1)
(Highlands) - Rt. 36 bridge to Sandy Hook bay	SE1
SIMONSON BROOK (Griggstown) - Entire length	FW2-NT
SIX MILE RUN	
(Franklin Church) - Entire length, except segment described below	FW2-NT
(Hillsborough) - Segment within the boundaries of Six Mile Run State Park	FW2-NT(C1)
SOUTH RIVER	
(Old Bridge) - Duernal Lake to intake of the Sayreville Water Department	FW2-NT
(Sayreville) - Below the intake of the Sayreville Water Department	SE1
SPOOKY BROOK (Bound Brook)	FW2-NT
SPRUCE RUN	
(Glen Gardner) - Source to, but not including, Spruce Run Reservoir	FW2-TP(C1)
(Clinton) - Spruce Run Reservoir dam to Raritan River, South Branch	FW2-TM
SPRUCE RUN RESERVOIR (Union) - Reservoir and tributaries	FW2-TM(C1)
STONY BROOK (Washington) - Entire length	FW2-TP(C1)
STONY BROOK	
(Hopewell) - Entire length, except that segment described below	FW2-NT
(Syndertown) - Brook and tributaries within Amwell Lake Wildlife Management Area	FW2-NT(C1)
STONY BROOK (Watchung) - Entire length	FW2-NT
SUN VALLEY BROOK (Mt Olive) - Entire length	FW2-TP(C1)
SWIMMING RIVER	
(Red Bank) - Source to the intake of the	FW2-NT

REFERENCE NO. 10

To: File	Date: June 21, 1993
From: Lisa Szegedi	Project #: 8003-085
Subject: Fisheries	Site Name: Webcraft Packaging Company

Based on the attached telecons, both Bound Brook and the Raritan River are considered low to moderate sport fisheries.

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. _____

Date: 7/18/92

Tune: 9:32 ☒ AM ☐ PM

☒ Incoming Call From: Arthur Lipine 908-236-2118
Telephone No.

Affiliation: NTDEP Fish Game, Wildlife

☐ Outgoing Call To: _____
Telephone No.

Affiliation: _____

Malcolm Pirnie Staff: DAVID KAHLENBERG 609 360 0100
(Receiving or Calling) Name Telephone No.

Summary of ☒ Conversation ☐ Agreement:

I spoke with Arthur Lipine to determine if there were fisheries
in the Ambrose and Green Brooks. He said that
both of the Brooks have low to moderate fishing
and assumed there was consumption of the fish.

Fish in AMBROSE BROOK: white suckers, brown bullhead, red drum,
sunfish, spot tail shiner, Tenselated Darter,
pumpkin seed sunfish, Blue gill sunfish, Bass,
Filly fish, cream chip picker, American c-
carr, pumpkin seed bass, large mouth bass
- it is classified as non-trout waters

Fish in the Green Brook: brown trout, pumpkin seed, brown bull,
common shiner, long nose acs, black
head acs, fat head minnow, silvery minnow,
banded belly fish
- is classified for trout maintenance

ARCS II CONTRACT 68-W5-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. _____

Date: 7/10/92

Time: 1:05 [] AM [x] PM

[x] Incoming Call From: Arthur Lipine 908-236-2118
Telephone No.

Affiliation: NJDEP - Div. Fish Game, Wildlife

[] Outgoing Call To: _____
Telephone No.

Affiliation: _____

Malcolm Pirnie Staff: DAVID KAHLENBERG 609 860 0100
(Receiving or Calling) Name Telephone No.

Summary of [x] Conversation [] Agreement:

Lipine returned my phone call and asked me about
the fisheries that exist from Chambers Brook to the North Branch
of the Raritan River to the main stream of the Raritan
River up to Boundbrook.

He stated that there are no fisheries along Chambers Brook
and nobody really fishes there. Also he said that the stream
brook cannot handle effluents and that the brook is
fairly small with a width varying in 2 to 3 ft to
6 ft wide.

He said that the North Branch of the Raritan River
has many fish including small mouth bass, some large mouth
bass, blue gill, rock bass, suckers, carp, and it
is stocked with trout.

He said that the Raritan River has American Shad
River herring, striped bass, Tiger muskellunge, Northern Pike
as well as others.

He said that the region is very heavily fished
during trout season.

REFERENCE NO. 11

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. 8003-313

Date: December 16, 1994

Time: 1:27 AM ☐ PM ☒

Call

To: James Gaffhey

(609) 633 - 1179
Telephone No.

Affiliation: NJDEP - Bureau of Water Supply Planning

Malcolm Pirnie Staff: Gary Bielen

GB

(609) 860-0100
Telephone No.

Summary of Conversation:

Wellhead Protection Areas are not yet delineated in the state of New Jersey.

REFERENCE NO. 12



**State of New Jersey
Department of Environmental Protection and Energy**

Division of Parks and Forestry
Office of Natural Lands Management
CN 404

Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

Robert C. Shinn, Jr.
Commissioner

Thomas F. Hampton
Administrator

February 15, 1994

Andrew Clibanoff
Malcom Pirnie, Inc.
104 Interchange Plaza
Cranbury, NJ 08512-9543

Re: Cornell Dubilier Electronics, Inc. and Associated Waterways

Dear Mr. Clibanoff:

Thank you for your data request regarding rare species information for the above referenced project site in Middlesex and Somerset Counties.

The Natural Heritage Data Base does not have any records for rare plants, animals, or natural communities on the Cornell Dubilier Electronics, Inc. site. However, there are records for a number of occurrences for rare species which may be on, or in the immediate vicinity of the waterways that you have associated with this site. The attached list provides additional information about these occurrences. Also attached is a list of rare species from records in the general vicinity of the project site (within approximately 4 miles).

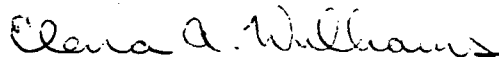
Also attached are lists of rare species and natural communities which have been documented from Middlesex and Somerset Counties. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish, Game and Wildlife, Endangered and Nongame Species Program.

In order to red flag the general locations of documented occurrences of rare and endangered species and natural communities, we have prepared computer generated Natural Heritage Index Maps. Enclosed please find these maps for the Bound Brook, New Brunswick, and Plainfield USGS quadrangles.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Elena A. Williams
Senior Planner
Natural Heritage Program

cc: Lawrence Niles
Thomas Hampton
NHP File No. 94-4007454

1.

15 FEB 1994

ON OR IN THE IMMEDIATE VICINITY OF ASSOCIATED WATERWAYS
 RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
 THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK	DATE OBSERVED	IDENT.
*** Vertebrates								
LANIUS LUDOVICIANUS MIGRANS	LOGGERHEAD SHRIKE	C2	E		G4G5T3T4	SN	1991-08-21	Y
*** Vascular plants								
BIDENS BIDENTOIDES	BUR-MARIGOLD	C23C			G3	S2	1918-10-??	Y
CYPERUS LANCASTRTENSIS	LANCASTER FLATSEDGE		E		G5	S2	1983-08-25	Y
MICRANTHEMUM MICRANTHEMOIDES	NUTTALL'S MUDWORT	C2*	E		GH	SH	1918-10-??	Y
POTAMOGETON VASEYI	VASEY'S PONDWEED				G4	SH.1	1921-09-26	Y
RANUNCULUS PUSILLUS	LOU SPEARWORT				G5	S2	1982-06-04	Y
SAGITTARIA SPATHULATA	TIDAL ARROWHEAD				G4	S3	198?-??-??	Y
SCUTELLARIA LEONARDII	SMALL SKULLCAP		E		G4T4	SI	1896-05-30	Y

8 Records Processed

1-

15 FEB 1994

GENERAL VICINITY OF PROJECT SITE
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK	DATE OBSERVED	IDENT.
*** Vertebrates								
AMMOORAMUS HENSLI	HENSLI'S SPARROW	C2	E		G4	S1	1963-??-??	Y
BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		E		G5	S1	1955-??-??	Y
CIRCUS CYANEUS	NORTHERN HARRIER		E/U		G5	S2	1988-08-23	
CLEMMYS MUHLENBERGII	BOG TURTLE	C2	E		G3	S2	1906-06-10	Y
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1979-06-20	Y
LANIUS LUDOVICIANUS MIGRANS	LOGGERHEAD SHRIKE	C2	E		G4G5T3T4	SN	1991-08-21	Y
*** Vascular plants								
ALISMA TRIVIALE	LARGE WATER-PLANTAIN		E		G5T5	S1	1932-08-05	Y
CAREX POLYMORPHA	VARIABLE SEDGE	C2	E		G2	S1	1878-05-??	Y
CYNOGLOSSUM VIRGINIANUM VAR VIRGINIANUM	WILD COMFREY				G5T5	S2	1980'S-05	Y
LEHNA VALDIVIANA	PALE DUCKWEED				G5	S1	1878-12-??	Y
RANUNCULUS PUSILLUS	LOW SPANWORT				G5	S2	1982-06-04	Y

11 Records Processed

EXPLANATIONS OF CODES USED IN NATURAL HERITAGE REPORTS

FEDERAL STATUS CODES

The following U.S. Fish and Wildlife Service categories and their definitions of endangered and threatened plants and animals have been modified from the U.S. Fish and Wildlife Service (F.R. Vol. 50 No. 188; Vol. 55, No. 35; F.R. 50 CFR 17.11 and 17.12). Federal Status codes reported for species follow the most recent listing.

- LE Taxa formally listed as endangered.
- LT Taxa formally listed as threatened.
- PE Taxa already proposed to be formally listed as endangered.
- PT Taxa already proposed to be formally listed as threatened.
- C1 Taxa for which the Service currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
- C1* Taxa which may be possibly extinct (although persuasive documentation of extinction has not been made--compare to 3A status).
- C2 Taxa for which information now in possession of the Service indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules.
- C3 Taxa that are no longer being considered for listing as threatened or endangered species. Such taxa are further coded to indicate three subcategories, depending on the reason(s) for removal from consideration.
- 3A Taxa for which the Service has persuasive evidence of extinction.
- SB Names that, on the basis of current taxonomic understanding, do not represent taxa meeting the Act's definition of "species".
- 3C Taxa that have proven to be more abundant or widespread than was previously believed

and/or those that are not subject to any identifiable threat.

S/A Similarity of appearance species.

STATE STATUS CODES

Two animal lists provide state status codes after the Endangered and Nongame Species Conservation Act of 1973 (NSSA 23:2A-13 et. seq.): the list of endangered species (N.J.A.C. 7:25-4.13) and the list defining status of indigenous, nongame wildlife species of New Jersey (N.J.A.C. 7:25-4.17(a)). The status of animal species is determined by the Nongame and Endangered Species Program (ENSP). The state status codes and definitions provided reflect the most recent lists that were revised in the New Jersey Register, Monday, June 3, 1991.

- D Declining species-a species which has exhibited a continued decline in population numbers over the years.
- E Endangered species-an endangered species is one whose prospects for survival within the state are in immediate danger due to one or many factors - a loss of habitat, over exploitation, predation, competition, disease. An endangered species requires immediate assistance or extinction will probably follow.
- EX Extirpated species-a species that formerly occurred in New Jersey, but is not now known to exist within the state.
- I Introduced species-a species not native to New Jersey that could not have established itself here without the assistance of man.
- INC Increasing species-a species whose population has exhibited a significant increase, beyond the normal range of its life cycle, over a long term period.
- T Threatened species-a species that may become endangered if conditions surrounding the species begin to or continue to deteriorate.
- P Peripheral species-a species whose occurrence in New Jersey is at the extreme edge of its present natural range.

- S Stable species-a species whose population is not undergoing any long-term increase/decrease within its natural cycle.
- U Undetermined species-a species about which there is not enough information available to determine the status.

Status for animals separated by a slash(/) indicate a dual status. First status refers to the state breeding population, and the second status refers to the migratory or winter population.

Plant taxa listed as endangered are from New Jersey's official Endangered Plant Species List N.J.S.A. 131B-15.151 et seq.

- E Native New Jersey plant species whose survival in the State or nation is in jeopardy.

REGIONAL STATUS CODES FOR PLANTS

- LP Indicates taxa listed by the Pinelands Commission as endangered or threatened within their legal jurisdiction. Not all species currently tracked by the Pinelands Commission are tracked by the Natural Heritage Program. A complete list of endangered and threatened Pineland species is included in the New Jersey Pinelands Comprehensive Management Plan.

EXPLANATION OF GLOBAL AND STATE ELEMENT RANKS

The Nature Conservancy has developed a ranking system for use in identifying elements (rare species and natural communities) of natural diversity most endangered with extinction. Each element is ranked according to its global, national, and state (or subnational in other countries) rarity. These ranks are used to prioritize conservation work so that the most endangered elements receive attention first. Definitions for element ranks are after The Nature Conservancy (1982: Chapter 4, 4.1-1 through 4.4.1.3-3).

GLOBAL ELEMENT RANKS

- G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3 Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; with the number of occurrences in the range of 21 to 100.
- G4 Apparently secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- G5 Demonstrably secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- GH Of historical occurrence throughout its range i.e., formerly part of the established biota, with the expectation that it may be rediscovered.
- GU Possibly in peril range-wide but status uncertain; more information needed.
- GX Believed to be extinct throughout range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.
- G? Species has not yet been ranked.

STATE ELEMENT RANKS

- S1 Critically imperiled in New Jersey because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres). Elements so ranked are often restricted to very specialized conditions or habitats and/or restricted to an extremely small geographical

area of the state. Also included are elements which were formerly more abundant, but because of habitat destruction or some other critical factor of its biology, they have been demonstrably reduced in abundance. In essence, these are elements for which, even with intensive searching, sizable additional occurrences are unlikely to be discovered.

- S2 Imperiled in New Jersey because of rarity (6 to 20 occurrences). Historically many of these elements may have been more frequent but are now known from very few extant occurrences, primarily because of habitat destruction. Diligent searching may yield additional occurrences.
- S3 Rare in state with 21 to 100 occurrences (plant species in this category have only 21 to 50 occurrences). Includes elements which are widely distributed in the state but with small populations/acreage or elements with restricted distribution, but locally abundant. Not yet imperiled in state but may soon be if current trends continue. Searching often yields additional occurrences.
- S4 Apparently secure in state, with many occurrences.
- SS Demonstrably secure in state and essentially ineradicable under present conditions.
- SA Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range; a few of these species may even have bred on the one or two occasions they were recorded; examples include european strays or western birds on the East Coast and visa-versa.
- SE Elements that are clearly exotic in New Jersey including those taxa not native to North America (introduced taxa) or taxa deliberately or accidentally introduced into the State from other parts of North America (adventive taxa). Taxa ranked SE are not a conservation priority (viable introduced occurrences of G1 or G2 elements may be exceptions).
- SH Elements of historical occurrence in New Jersey. Despite some searching of historical occurrences and/or potential habitat, no extant occurrences are known. Since not all of the historical occurrences have been field surveyed, and unsearched potential habitat remains, historically ranked taxa are considered possibly extant, and remain a conservation priority for continued field work.

- SN** Regularly occurring, usually migratory and typically nonbreeding species for which no significant or effective habitat conservation measures can be taken in the state; this category includes migratory birds, bats, sea turtles, and cetaceans which do not breed in the state but pass through twice a year or may remain in the winter (or, in a few cases, the summer); included also are certain lepidoptera which regularly migrate to a state where they reproduce, but then completely die out every year with no return migration. Species in this category are so widely and unreliably distributed during migration or in winter that no small set of sites could be set aside with the hope of significantly furthering their conservation. Other nonbreeding, high globally-ranked species (such as the bald eagle, whooping crane or some seal species) which regularly spend some portion of the year at definite localities (and therefore have a valid conservation need in the state) are not ranked SN but rather S1, S2, etc.
- SR** Elements reported from New Jersey, but without persuasive documentation which would provide a basis for either accepting or rejecting the report. In some instances documentation may exist, but as of yet, its source or location has not been determined.
- SRF** Elements erroneously reported from New Jersey, but this error persists in the literature.
- SU** Elements believed to be in peril but the degree of rarity uncertain. Also included are rare taxa of uncertain taxonomical standing. More information is needed to resolve rank.
- SX** Elements that have been determined or are presumed to be extirpated from New Jersey. All historical occurrences have been searched and a reasonable search of potential habitat has been completed. Extirpated taxa are not a current conservation priority.
- SXO** Elements presumed extirpated from New Jersey, but native populations collected from the wild exist in cultivation.
- T** Element ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species. For example *Stachys palustris* var. *homotricha* is ranked "GST? SH" meaning the full species is globally secure but the global rarity of the var. *homotricha* has not been determined; in New Jersey the variety is ranked historic.
- Q** Elements containing a "Q" in the global portion of its rank indicates that the taxon is of questionable, or uncertain taxonomical standing, e.g., some authors regard it as a full species, while others treat it at the subspecific level.

.1 Elements documented from a single location.

Note: To express uncertainty, the most likely rank is assigned and a question mark added (e.g., G2?).
A range is indicated by combining two ranks (e.g., G1G2, S1S3).

IDENTIFICATION CODES

These codes refer to whether the identification of the species or community has been checked by a reliable individual and is indicative of significant habitat.

- | | |
|-------|--|
| Y | Identification has been verified and is indicative of significant habitat. |
| BLANK | Identification has not been verified but there is no reason to believe it is not indicative of significant habitat. |
| ? | Either it has not been determined if the record is indicative of significant habitat or the identification of the species or community may be confusing or disputed. |

REFERENCE NO. 13

KEE
CROSS SECTION BOOK
82 0066

Cornell Dubilier
Electronics
South Plainfield, NJ

Project No.: 8003-306

**CORNELL DELZIER
ELECTRONICS**

**SITE INSPECTION PRIORITIZATION
ON-SITE RECONNAISSANCE**

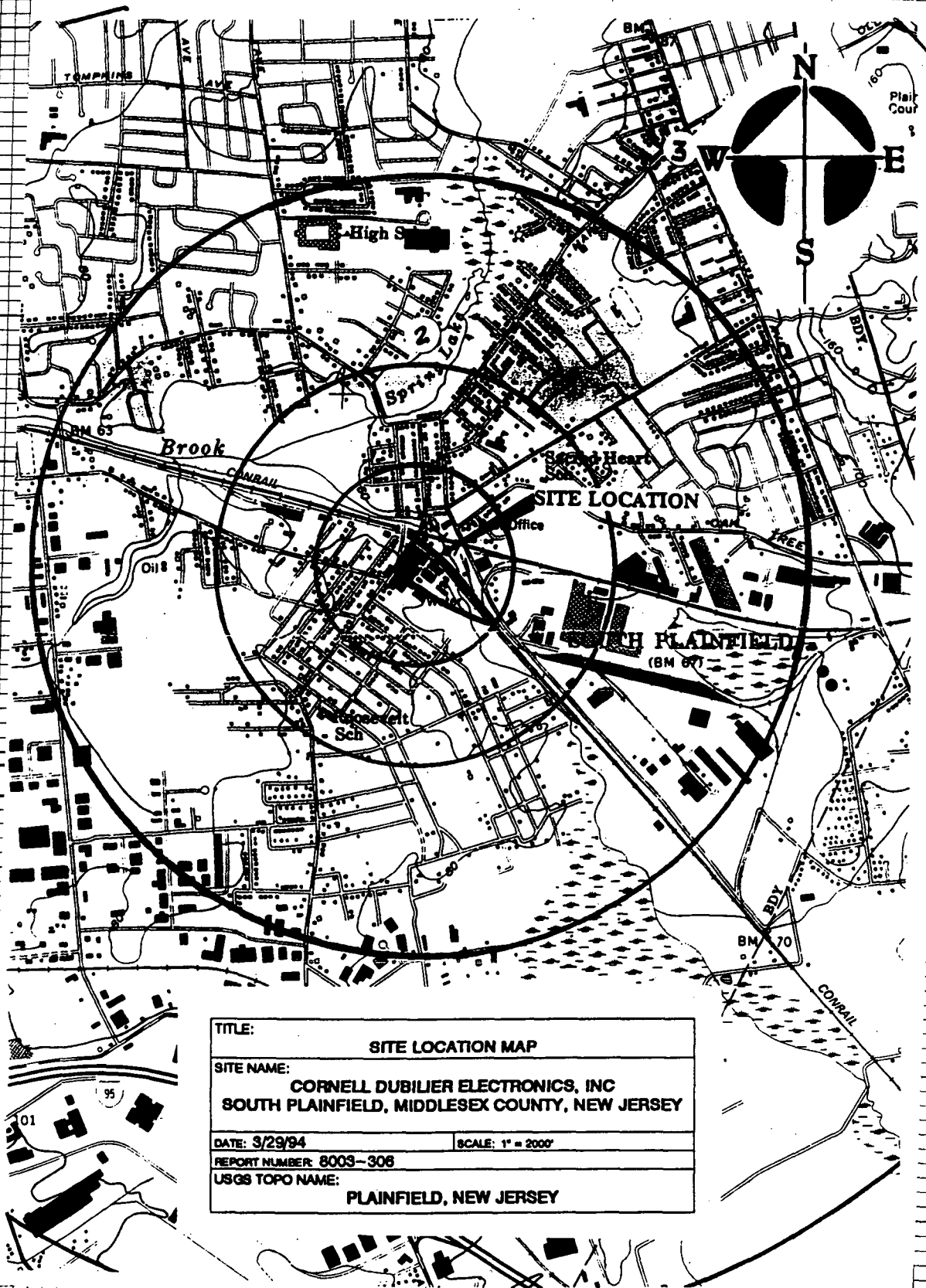
MARCH 30, 1994

Job No.: 8003-306

CERCLIS ID No.: NJD981557879

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<u>Description</u>	<u>Page No.</u>
Site Location Map	1
Site Map	2
Field Notes	3-7



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBILIER ELECTRONICS, INC	
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 3/29/94	SCALE: 1" = 2000'
REPORT NUMBER: 8003-306	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

Andrew Lee
 3/30/94
 4

LEHIGH

VALLEY

RAILROAD

REPORT

15

AVE.

FACTORY

street not found

marsh

~~200~~
AC

House

[illegible]

ST.

FULTON

AVE.

SHEET

No. 29

150

३५५

٤٢

SECRET

Entrepreneur

1944
HAMILTON
1944

Andrew Cliburn
3/30/94

Andrew Clibanoff
3/30/14

(3)

Andrew Clibanoff
3/30/14

1015 Arrive on-site. Ask workers where
Lester Pae may be found.

Weather Conditions: Partly Cloudy
Windy

Temp: 45°C

~~Lester~~^{AC} Told that Mr. Pae may be found
in small office near water tower

Malcolm Pirnie Personnel on-site

Andrew Clibanoff	Site Manager
Gary Bielen	Health & Safety Off.
Colleen Dwyer	Field Team Member

1030 Met Lester Pae in Norpak's office at the site.

Mike Sanfranceschi of Norpak was also there.

I explained the purpose of this recon to
the two of them and asked them if there are
any existing site maps. Mr. Pae said there are no
real site maps. He did give me maps which indicate
building numbers. Mr. Sanfranceschi told me the
names of the companies occupying the corresponding
buildings (see following page).

Andrew Clibanoff
3/30/14

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

(6)

(3)

Andrew Chaff
3/30/94

(4)

List of Tenants

1. Hope Intl

2b. Forman Industries

2. Promotion Assoc.

2a. M&B Tool & Die

344. Able Metro Moving

4a. Parker Interior Landscape

545a Columbia Products

6. Action Sign

7,8,9. Galaxy Door

9a Pioneer Assoc.

10. Ultrasonic Polders - Catalyst Systems, motor
Spline

12. R & M Manufacturing

13. Heckle & Heckle

14. JRS Machine Co

15. Gundacker Inc.

16. Stars Lawn Service

18. Norpak

All others vacant.

Mike SanGiovanni

Andrew Chaff
3/30/94

Andrew Chelovoff
5/30/88

(5)

1045 Mr. Pae stated that there are no monitoring wells on-site and that the two wells remaining on-site are in the process of being sealed. The water tower is no longer in use. The Norpak building formerly held a large boiler which had leaked heating oil. Soil with "low levels" of hydrocarbons from the boiler room were excavated and placed into an on-site pile and covered with plastic. Mr. Pae told me that he would not be accompanying us further in the site recon and that we should ask Mr. Sanbivannan if we have any questions. I thanked Mr. Pae for his time and went to brief the field teams of my findings.

1100 G. Bielen conducts brief tailgate health & safety meeting.

1110 G. Bielen & readies air monitoring equipment.
OVA # EPA 729620
HNU # EPA 729628 10.2 mV probe
Background Concentration: 0 ppm for both
OVA & HNU

Andrew Chelovoff
5/30/88

(8)

1115 Photo file

1120 Photo

1121 Rea dr

1122 1P
1P

1123 1P
1B

1130 Proceed along of arc RR to Seare PCB &

1145 Medd: prope locate

(5)

11:15 Photo IP1/IS1 Picture of contaminated soil pile outside of building no. 1A.

11:20 Photo IP2 } view of back lot ^{AC} ~~contaminated~~
IS2 } Noting tanks on left hand side.

11:21 Reading on HMM

11:22 IP3 } Picture of tanks located at top
IS3 } of Banks of Board Brook

11:23 IP4 } Picture of 5th Tank (East of other 4)
IS4 }

11:30 Proceeded to walk through back lot of property along abandoned set of RR tracks perched atop of area sloping down to brook - Lehigh Valley RR tracks located on opposite side of brook. Searching for area of stained soil where PCB contamination may be present.

11:45 Heading back to vehicle along southern property boundary. Unable as of yet to locate contaminated soil area.

Andrew Blumoff
3/30/94

(9)

Andrew Blawieff
3/30/91

(7)

1200 - Arrive at vehicle. Leaving the site and
breaking for lunch.

1230 - Back at site drive around outside
perimeter of site,

1300 - Took pictures of IRS Bldgs 15, 14
155
1P5 16, 18

156 + 1P6 aboveground storage
tank between Bldg's No. 9, 10, 11

1334 - 1P7 + 157 - Picture of brook
upstream of RR tracks (abandoned)

1335 - 1P8 + 158 - Bound Brook downstream
of RR track

1339 1P9 + 159 - Standing at back of lot
Picture of field w/ bldgs. in background

1341 1P10 + 1510 Tank on Bank of Brook

1344 1P11 + 1511 - Picture of tanks taken
from PPE

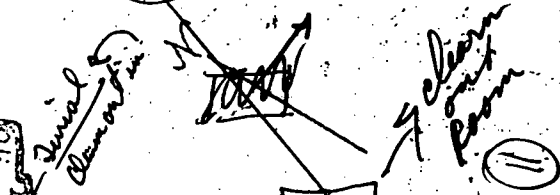
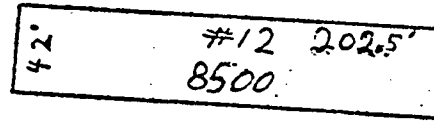
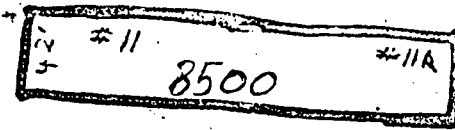
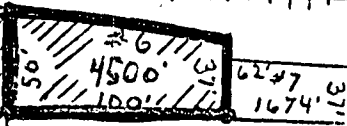
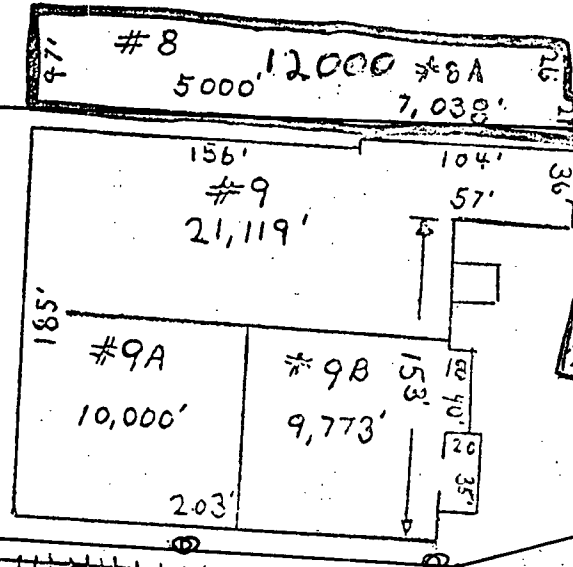
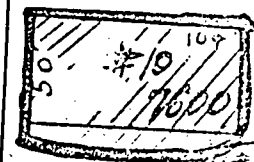
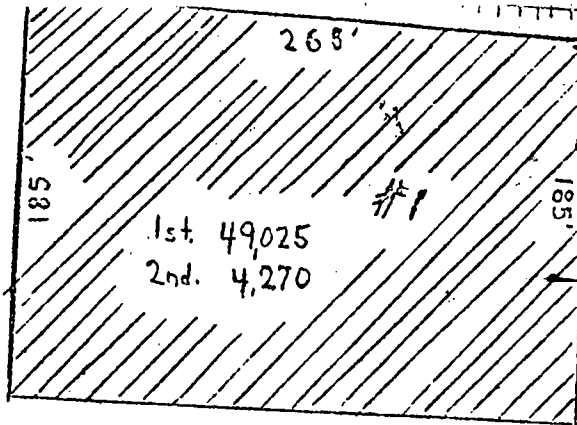
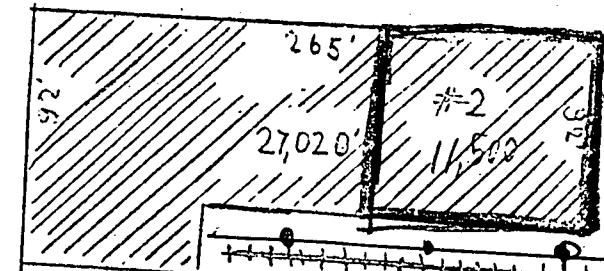
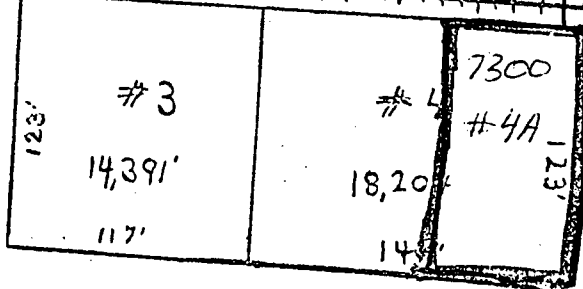
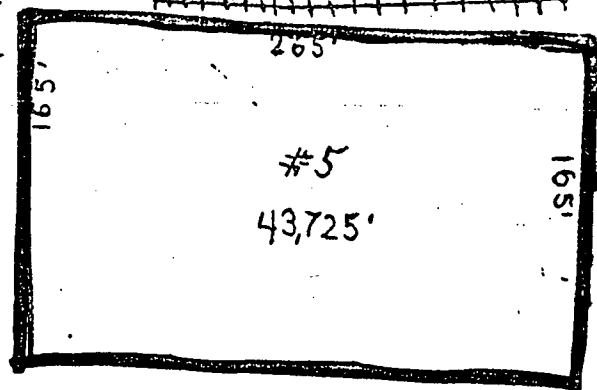
Andrew Blawieff
3/30/91

(10)

SEWERS

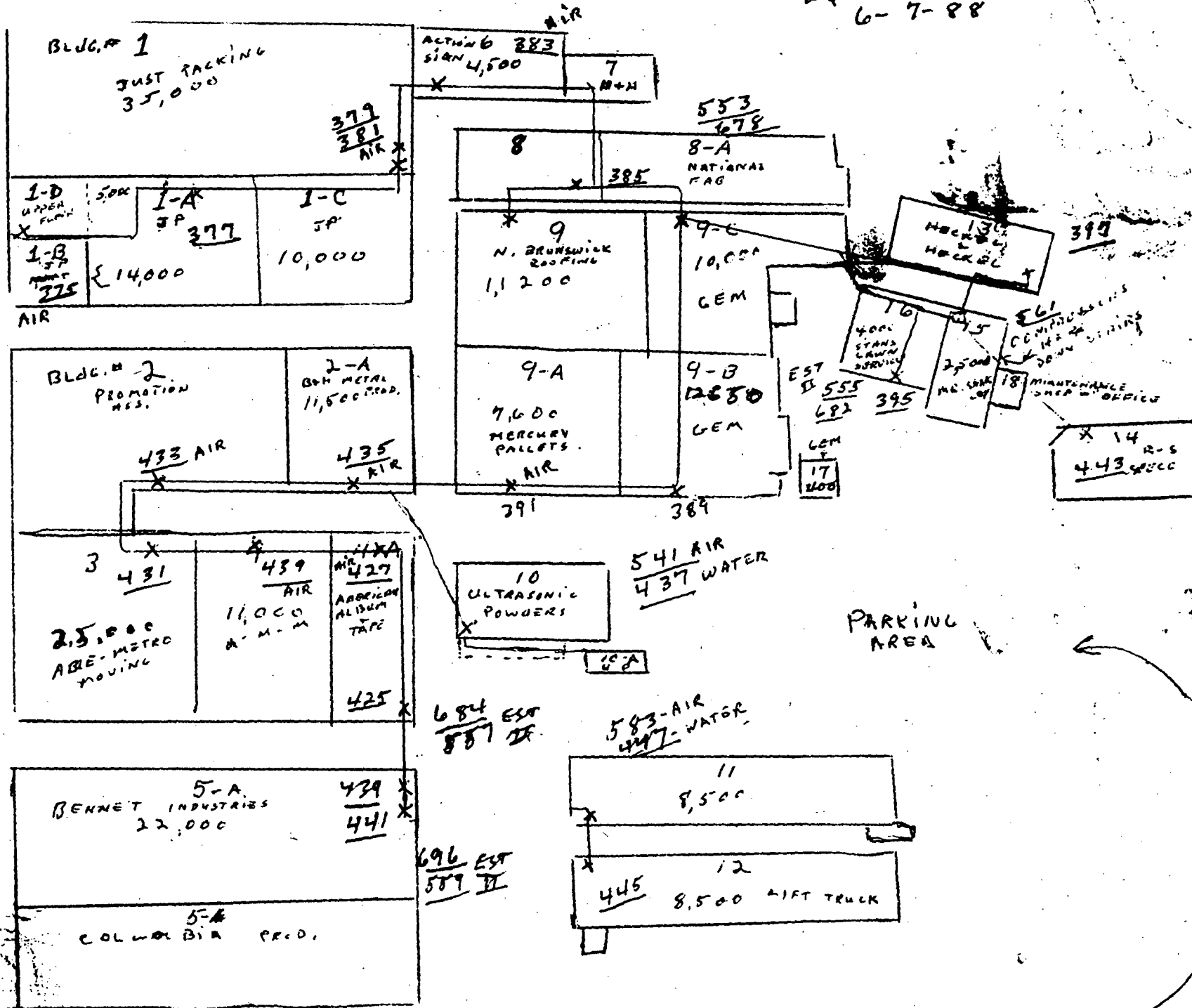
HAMILTON INDUSTRIAL PARK
SOUTH PLAINFIELD, N.J.

HAMILTON BLVD.



LEGEND:
- REN'

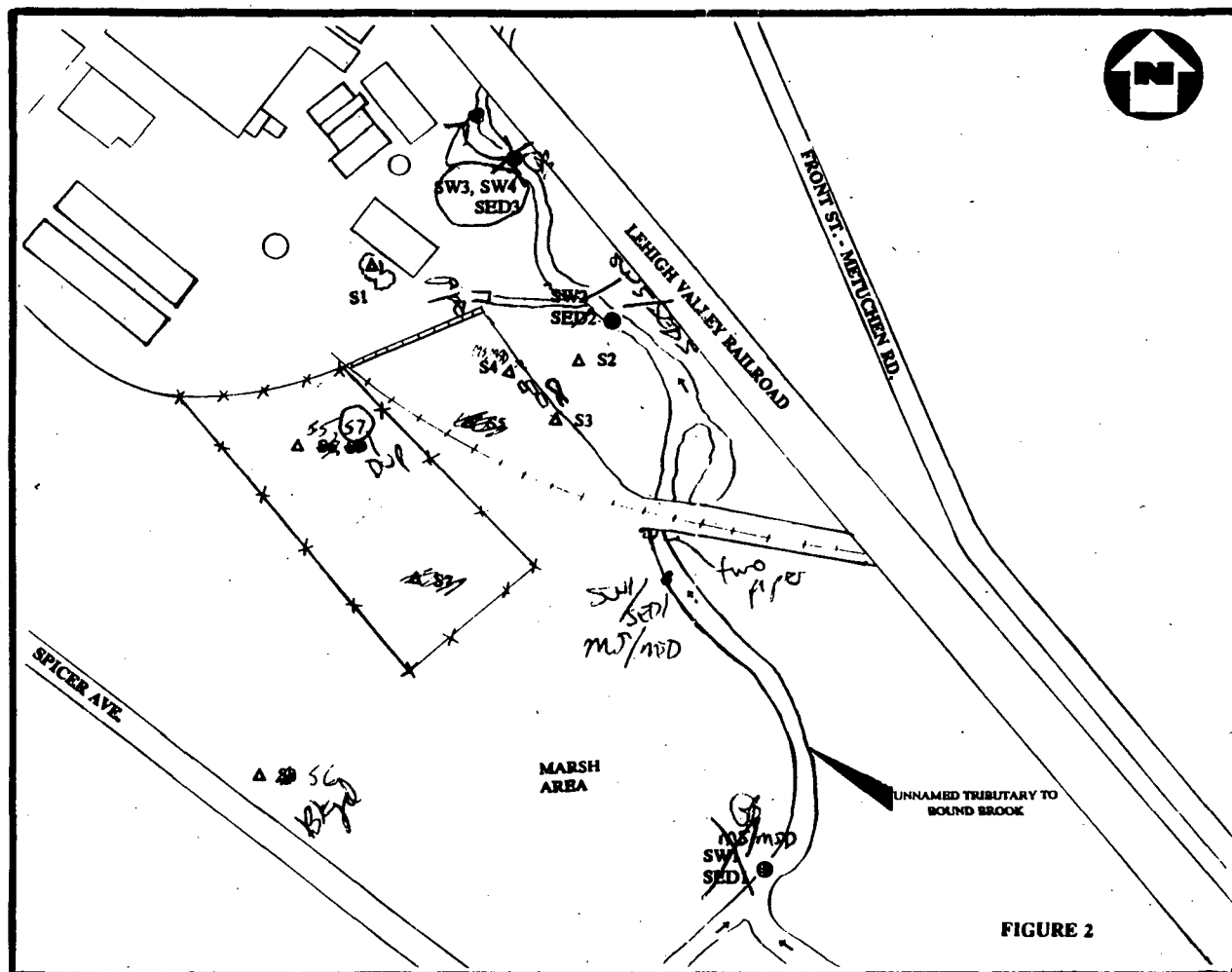
PARKING AREA



REFERENCE NO. 14

Cornell Dubilier

South Plainfield, NJ



MAP KEY	
SOIL SAMPLE	△
SURFACE WATER/SEDIMENT SAMPLE	●

CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE

Gary Bielew 6/8/94

Corwell Debiler Sampling

850 Arrive at site, meet Lestelae
he will be taking a jar
of soil per location w/ note
Weather: Cloudy, overcast San Giovanni
65°F

Setting up decan area

Malcolm Pirnie personnel arrives
they have read #15 plan

Gary Bielew

~~Gary Bielew~~

Dave Kiklenberg

~~Dave Kiklenberg~~

Chris Bath

~~Chris Bath~~

Lilli Gonzalez

~~Lilli Gonzalez~~

Colleen Dwyer

~~Colleen Dwyer~~

Cancer EPA # 734-748 slides

EPA # 734-744 photos

OVA EPA # 729 021

HNH EPA # 729 027

mini Alert EPA # 734 065

Gary Bielew 6/8/94

Gary Biehn
6/8/99

920 GAS check HNU and OVA

HNU checkout OK with
isobutylene span 8.08

OVA & HNU were calibrated
in the equipment room with
(in Cranbury)

isobutylene and methane 95 ppm

OVA checked out OK at
equipment room was set

to 95 ppm span 3.0

in field OVA was checked

to methane @ 95 ppm span 3.0

need only 75 ppm, we will

use the OVA everything else
is working fine.

940 Trip blank was done
(FB-1)

945 Rinsate I (Pen 1) collected

7 drops of hydrochloric acid
rinsate done on bowl & scoopula

6/8/99 2-40ml VOA's

2-8002 methane

Gary Biehn 6/8/99

(4)

Gary Biele
6/11/94

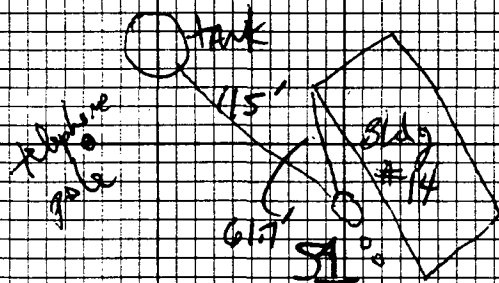
1000 Rinso 2 (Rin2) collected on
the ground
7 drops of hydrochloric acid

1005 Dave Hahlenberg conducts health
and safety meeting

1015 Done with rinsates

1027 Chris Bath collecting S1
from pile adjacent to
Bldg #14

Soil - reddish, granular
looks like construction debris
push ramp over soil pile
point is 286° NW to above ground
tank 260° W to telephone pole



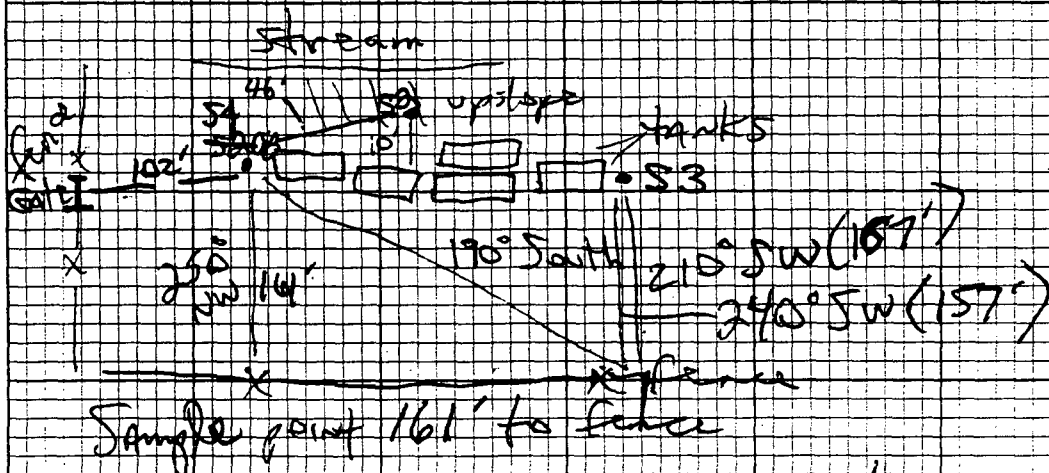
Zero readings on OVA #14 NW
Gary Biele 6/11/94

1035 Done with S1

staking location

18/15CBH collecting S1

1050 Start S4 south of
tank disposal area



1052 C. Bark collecting S4 2P/25
black organic soil, starved area

1055 Done with S4 move on to S3
End on OVA/HW

1105 Collecting S3, Collen Dwyer
Sampling Soil black, organic
area, black, organic
Sample point 2 from last tank

1110 3P/33 C. Dwyer collecting S3

Sample pt 157' SW to fence
167' to end of fence

Jay Buhl 6/8/94

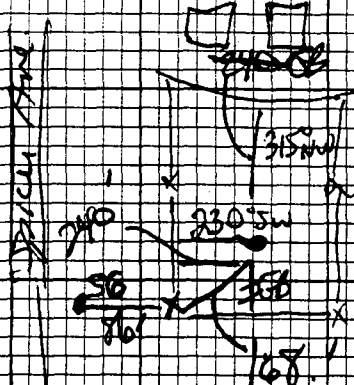
6

Jay Biden
6/8/74

4/8/95 S2 being collecting
soil dark black, organic
taken in possible runoff area from tanks

1135 Done with 52

1200 C. Bath collecting SS
from within lined area
SP/SS C. Bath collecting SS
Zero on HW and OVA



85, 57

1685 to corner
fence post
240' SW to fence

No photo of 57

Harry Barker
6/8/44

Gary Bieden 6/8/94

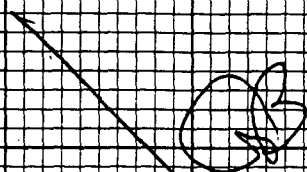
1210 C. Bath collecting S7 Duplicate
from same location as S5
No photo taken S7

1220 C. Dwyer collecting S6
Bkgd soil sample
collected S6 NE from
end fence post of enclosed area
6/65

S5 NE from S6 to
end fence post of enclosed area

1235 Done with S6
break for lunch

1335 Gary to collect SW ³/₄ S6 ³/₄ S7
which is an MS/MJD



Gary Bieden 6/8/94

(8)

141*

WE

1430

1500

D

7

1505

1510

1515

1530

Gray Birch 6/8/54

1415 Identified a effluent pipe
20-30" originating somewhere
on site, discharging to
unnamed tributary to
Board Brook

we will add a new sample
SW 5 / SED 5

1430 Determined where 270' is from
SW 2 / SED 2 location ~20' upstream
of SW 5 / SED 5

1500 DAVID Kahlenberg collecting
SW 3 / SED 3 & SW 4

D. Kahlenberg started with
SW 3 & then SW 4
then SED 3

7 drops of HCl added to 40ml
10A vials

1505 D. Kahlenberg starts SW 3
~30 ft from summit back bridge, downstream

1510 D. Kahlenberg collects SW 4 sp/25
7P/75

1515 D. Kahlenberg collects SED 3
7P/75

1530 Done with SW 3 / SED 3, SW 4

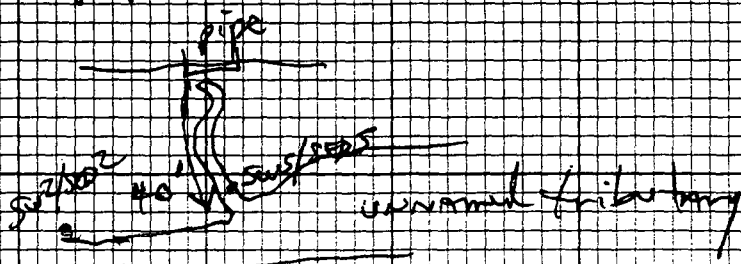
Gary B. 6/8/74

~~1500~~

1535 10P/10J effluent pipe

Stream convergence with
unnamed tributary
SW S/SEP S

1540 D. Kahlerberg collecting SW S/SEP S
~40' downstream from effluent
pipe



1555 Done with SW S/SEP S

11P/11J picture of
effluent pipe

Gary B. 6/8/74

10

1615

1645

1705

1710

1800

14

14

SEDS
it

Gray Bids 6/8/98

1615 D. Fahlenberg collecting
SW2/SE2 ~ 35'
~ 70' NE downstream of SW5/SE5
in unnamed tributary to
Round Brook

128/125 collecting SW2/SE2

1645 J. Fahlenberg collecting
SW1/SE2 ms/md
10' SW of ~ 8' DIA concrete
pipe 138/135

Triple volume for ms/md
we filled at this location
a clean glass ~ 1/2 oz jar for
Lester Pae.

1705 148/145 picture of submerged
55 gallon drum 15' from two
8' pipes

1710 Done with sampling
L. Gutzwiller doing SMO work

1800 Deliver samples to Fed Ex

Gray Bids

11

REFERENCE NO. 15

SAMPLE TRIP REPORT

SITE NAME: Cornell Dubilier Electronics Site

PROJECT No.: 8003-306

CERCLIS ID No.: NJD9S1557879

SAMPLING DATE: June 8, 1994

EPA CASE No.: 22276

1. Site Location: Hamilton Boulevard, South Plainfield, New Jersey - Refer to Figure 1
2. Sample Locations: Refer to Figure 2
3. Sample Descriptions: Refer to Table 1
4. Laboratories Receiving Samples:

<u>Sample Type</u>	<u>Name and Address of Laboratory</u>
Full TCL Organics	Ross Analytical Services Inc. 16433 Foltz Industrial Parkway Strongsville, Ohio 44136
TAL Inorganics (except CN)	IT Analytical Services - Export 5103 Old William Penn Highway Export, PA 15632

5. Sample Dispatch Data:

A total of eight (8) aqueous samples and eleven (11) soil/sediment samples were shipped on June 8, 1994 by MPI personnel, via Federal Express, in four (4) coolers, under Airbill No. 1948604302 to Ross Analytical Services Inc. for Full TCL Organics analyses. A total of seven (7) aqueous samples and eleven (11) soil/sediment samples were shipped on June 8, 1994 by MPI personnel, via Federal Express, in two (2) coolers, under Airbill No. 1948604313 to IT Analytical Services - Export for TAL Inorganics (excluding ON) analyses.

6. Sampling Personnel:

<u>Name</u>	<u>Organization</u>	<u>Duties on Site</u>
Gary Bielen	Malcolm Pimie, Inc.	Site Manager (SM)
David Kahlenberg	Malcolm Pimie, Inc.	Site Health & Safety Officer (SHSO)
Lilli Gonzalez	Malcolm Pimie, Inc.	Sample Management Officer (SMO)
Christopher Bath	Malcolm Pimie, Inc.	Sampler
Colleen Dwyer	Malcolm Pimie, Inc.	Sampler

7. Weather Conditions:

06/08/94 Overcast; temperature, 65° F

8. Additional Comments:

All samples will be analyzed for Target Compound List (TCL) organic and Target Analyte List (TAL) inorganic compounds, excluding cyanide.

The trip blank (TB1) was present during the collection of all aqueous samples. TB1 is associated with all the surface water (SW) samples collected on June 8, 1994.

None of the samples showed a reading above background on the OVA or HNu.

The surface water/sediment sample (SW1/SED1) was moved from its original location to a new location further downstream due to access problems caused by excessive vegetative growth.

An additional surface water/sediment sample (SW5/SED5) location was added upon the discovery of a storm drain pipe that was discharging effluent into the stream. SW5/SED5 was collected at the probable point of entry of the discharge into the stream.

RIN1 was a rinsate sample collected from a scoopula and bowl. RIN2 was a rinsate sample collected from a trowel. These rinsates are associated with all of the sediment and soil samples collected on June 8, 1994.

9. Report Prepared By:

Andrew C. Blumoff

Date: June 21, 1994

10. QA/QC Approved By:

Jim Greco

Date: June 21, 1994

TABLE 1
SAMPLE DESCRIPTIONS
CORNELL DUBIUER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
S1	BPD08	MBLF01	1027	Soil	Soil sample collected from pile located adjacent to Building No. 14. Sample was collected 106° southeast and 115' away from the aboveground tank. Sample depth 0-1 foot.
S2	BPD09	MBLF81	1125	Soil	Surface soil sample collected 10' east downslope of tank disposal area and 46' east of soil sample S4. Sample depth 0-1 foot.
S3	BPD10	MBLF82	1105	Soil	Surface soil sample collected 2' south of the tank disposal area. The sample location is 167' from the southeast corner of the fence (bearing unknown). Sample depth: 0-1 foot.
S4 ⁽¹⁾	BPD11	MBLF83	1050	Soil	Surface soil sample collected just north of the tank disposal area. The sample location is 102' from the gate on north side of fence (bearing unknown). Sample depth: 0-1 foot.
S5	BPD12	MBLF25	1200	Soil	Surface soil sample collected from within the fenced-in area on the back lot of the property, south of the buildings. This sample location was 168' from southwest corner of fence (bearing unknown). Sample depth: 0-1 foot.

(1) Sample location designated for the collection of MS/MSD or MS/MD sample.

(2) Sample location designated for the collection of field duplicate sample.

(3) N/A means not applicable.

TABLE 1 (Continued)
SAMPLE DESCRIPTIONS
CORNELL DUBIUER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
S6	BPD25	MBLF26	1220	Soil	Background soil sample collected 235° southwest and 86' from the southwest corner of the fence. Sample depth: 0-1 foot.
S7 ⁽²⁾	BPD26	MBLF27	1210	Soil	Duplicate soil sample collected at same location as sample S5.
SW1 ⁽¹⁾	BPD27	MBLF28	1645	Aqueous	Background surface water sample collected from the unnamed tributary to Bound Brook 10' upstream of an 8' diameter concrete culvert located upstream of the tank disposal area.
SW2	BPD28	MBLF29	1615	Aqueous	Surface water sample collected from the unnamed tributary to Bound Brook at tank disposal area's probable point of entry (PPE) into the unnamed tributary of Bound Brook. The sample was collected 300' upstream of the Lehigh Valley Railroad Bridge.
SW3	BPD29	MBLF30	1505	Aqueous	Surface water sample collected from the unnamed tributary to Bound Brook at point that encompasses 0.1 miles of wetland frontage from the tank disposal area PPE. This point was 30' upstream from the Lehigh Valley Railroad Bridge and 270' downstream of SW2/SED2.

(1) Sample location designated for the collection of MS/MSD or MS/MD sample.

(2) Sample location designated for the collection of field duplicate sample.

(3) N/A means not applicable.

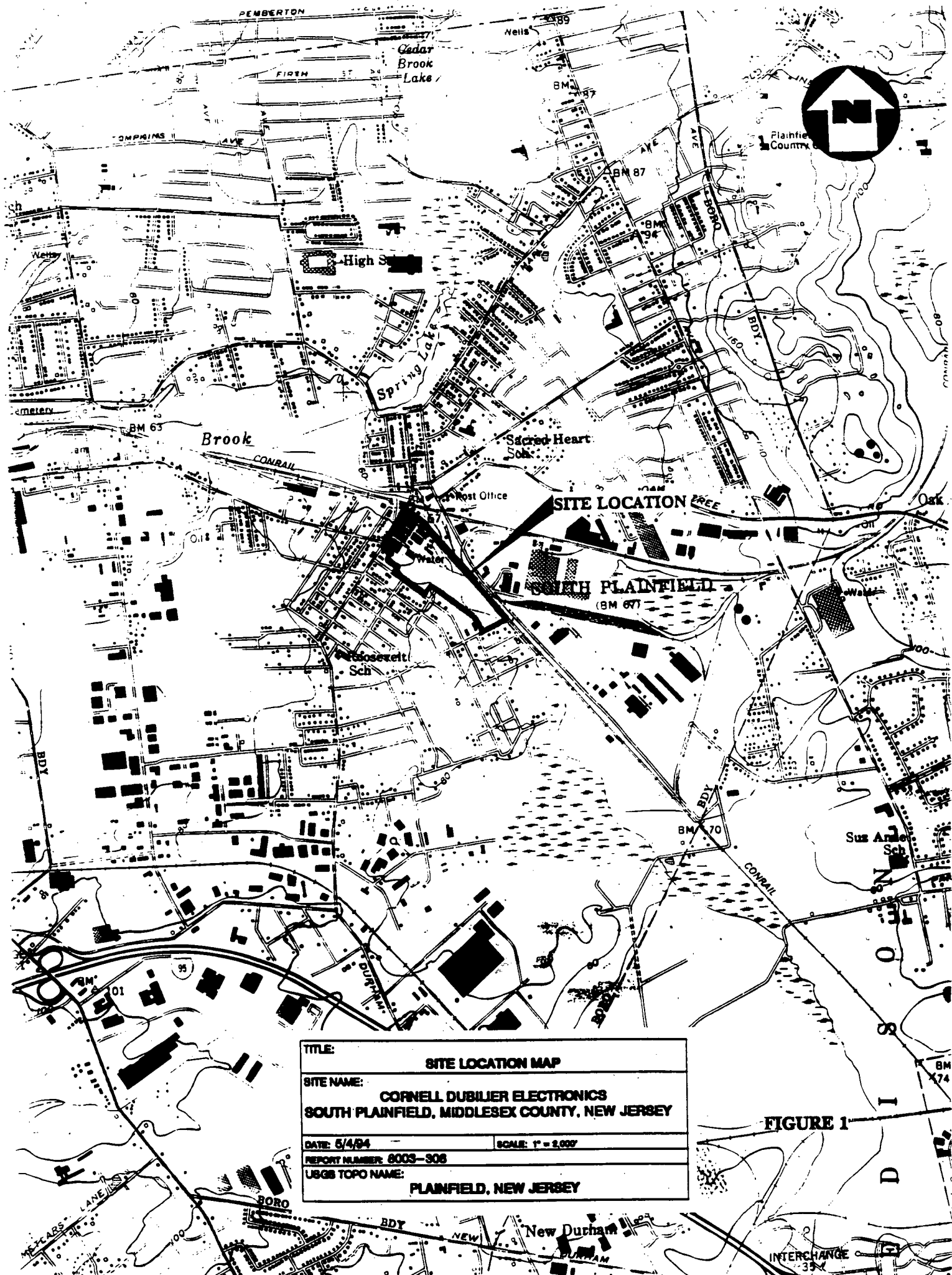
TABLE 1 (Continued)
SAMPLE DESCRIPTIONS
CORNELL DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
SW4 ⁽²⁾	BPD30	MBLF31	1510	Aqueous	Duplicate surface water sample collected at same location as sample SW3.
SW5	BPG00	MBLF37	1540	Aqueous	Surface water sample collected at the point where the stormwater pipe discharge enters the unnamed tributary of the Bound Brook. This location is 265' upstream of the Lehigh Valley Railroad Bridge.
SED1	BPD31	MBLF32	1645	Sediment	Sediment sample collected at same location as sample SW1.
SED2	BPD32	MBLF33	1615	Sediment	Sediment sample collected at same location as sample SW2.
SED3	BPD33	MBLF34	1515	Sediment	Sediment sample collected at same location as sample SW3.
SED5	BPG07	MBLF38	1540	Sediment	Sediment sample collected at same location as sample SW5.
RIN1	BPD34	MBLF35	0945	Aqueous	Rinsate sample collected from bowl and scoopula. See Statement 8.
RIN2	BPD83	MBLF36	1000	Aqueous	Rinsate sample collected from trowel. See Statement 8.
TB1	BPF99	N/A ⁽³⁾	0940	Aqueous	Trip blank. See Statement 8.

(1) Sample location designated for the collection of MS/MSD or MS/MD sample.

(2) Sample location designated for the collection of field duplicate sample.

(3) N/A means not applicable.



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBILIER ELECTRONICS	
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 5/4/84	SCALE: 1" = 2,000'
REPORT NUMBER: 8003-306	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

FIGURE 1

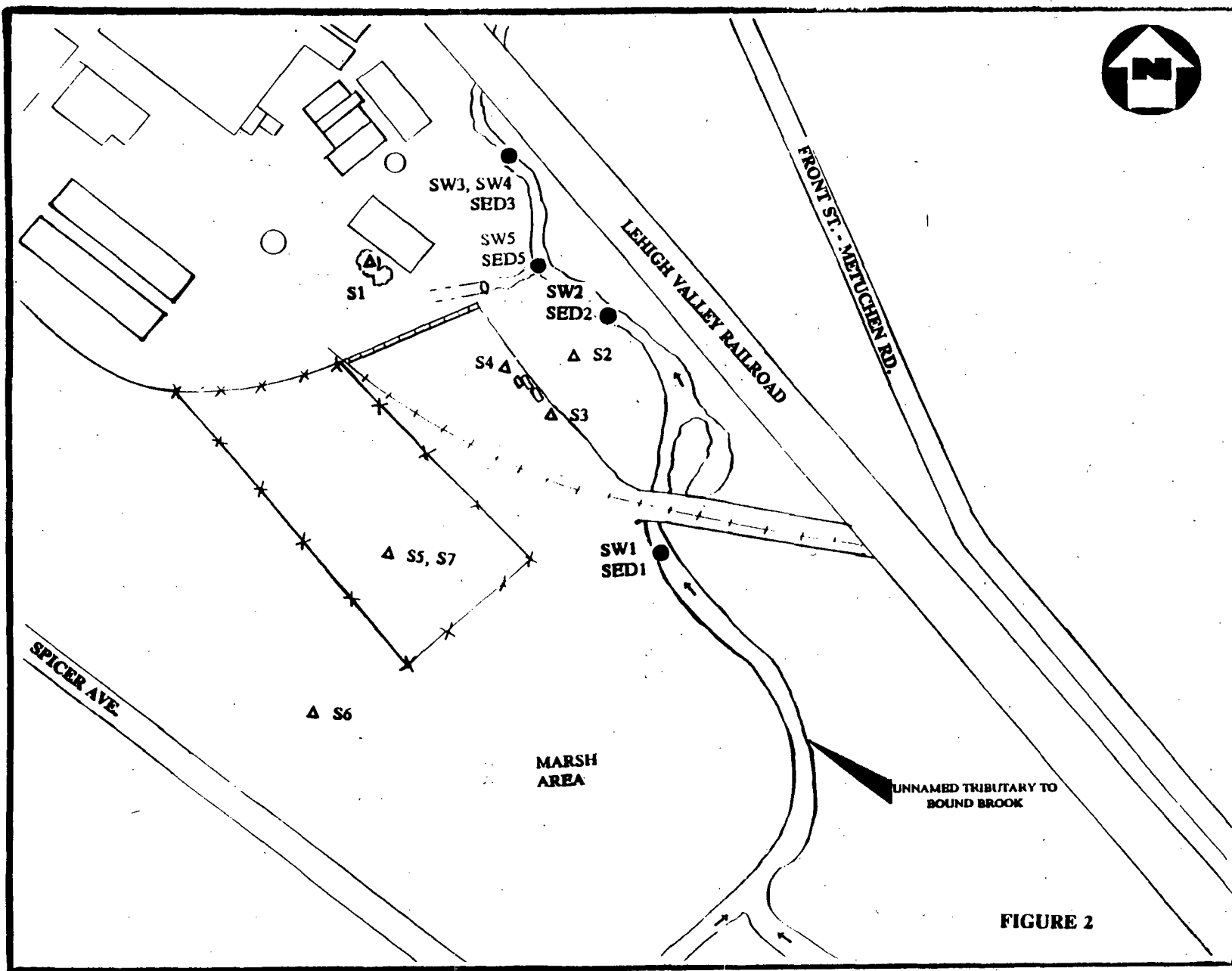


FIGURE 2

MAP KEY

SOIL SAMPLE
SURFACE WATER/SEDIMENT SAMPLE



CORNEM, DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE

REFERENCE NO. 16

To:File	Date:December 28, 1994
From:Andrew Clibanoff	Project #:8003-306
Subject:USEPA Analytical Data - June 8, 1994	Site Name:Correll Dubilier Electronics

The USEPA Inspected the Correll Dubilier Electronics (CDEI) site on June 8, 1994 and collected samples from six surface soil, four surface water and four sediment sample locations. All of the chemical analyses for the site inspection prioritization sampling event were performed by USEPA Certified Laboratories for Target Compound Ust (TCL) organic compounds and Target Analyte Ust (TAL) Inorganic constituents. The analytical data has been analyzed and validated using USEPA Contract Laboratory Program (CLP) protocols.

Sample locations can be found in the Sample Trip Report (Ref. No. 15).

The following provides a list of the hazardous substances detected at concentration greater than 3 times background in the soil samples collected from the CDEI site during the June 8, 1994 USEPA site inspection prioritization sampling event:

Volatiles: 1,2-dichloroethene (19 E ug/kg), trichloroethene (82 E ug/kg)

Semi-volatiles: phenanthrene (2,200 ug/kg), anthracene (380 ug/kg), fluoranthene (5,000 ug/kg), pyrene (2,900 ug/kg), benzo(a)anthracene (1,800 ug/kg), chrysene (2,300 ug/kg), benzo(b)fluoranthene (2,500 ug/kg), benzo(k)fluoranthene (1,600 ug/kg), benzo(a)pyrene (1,900 ug/kg), indeno(1,2,3-cd)pyrene (1,400 ug/kg), dibenz(a,h)anthracene (460 ug/kg), and benzo(g,h,i)perylene (1,100 ug/kg)

Pesticides/PCBs: aroclor-1254 (1,100,000 ug/kg)

Inorganics: arsenic (25.7 mg/kg), cadmium (35.7 mg/kg), chromium (78.6 mg/kg), lead (2,200 mg/kg), mercury (2.9 mg/kg), and silver (26.7 mg/kg)

No observed releases to surface water could be documented with the analytical results of the surface water samples collected for this sampling event. While reviewing the sediment analytical data, it was noticed that the designated background sediment sample (SED1) contained the highest concentration of a PCB (aroclor-1254) (550,000 ug/kg). It was determined that the SED1 sample location was not adequate, as this location would receive stormwater runoff from the fenced portion of the back lot, an area of the site initially believed to be "clean." A soil sample collected from within the fenced area (S5) was found to contain the highest concentration of PCBs at the site (aroclor-1254 at 1,100,000 ug/kg).

In order to establish an observed release to surface water, a second round of sampling would need to be completed.

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-306
 SAMPLING DATE: 6/8/04
 EPA CASE NO.: 22276 LAB: ROSS

VOLATILES	DUP OF SWS									
Sample ID No.	SW3	SW4	SWS	SED1	SED2	SED3	SED5	RIN1	RIN2	TBI
Traffic Report No.	BPD28	BPD30	BPG00	BPD31	BPD32	BPD33	BPG07	BPD34	BPD83	BPF08
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	WATER	WATER	WATER
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor	1	1	1	1	1	1	1	1	1	1
Percent Moisture	--	--	--	38	56	30	46	--	--	--
Chloromethane										
Bromomethane										
Vinyl Chloride										
Chloroethane										
Methylene Chkvide								0.6 J	1 J	
Acetone								7 J	10	7 J
Carbon Disulfide								0.5 J		
1,1-Dichloroethene				1 J						
1,1-Dichloroethane				51 E	23 E	4 J	4 J			
1,2-Dichloroethene (total)	5 J	S J	100							
Chloroform										
1,2-Dichloroethane										
2-Butanone	3 J									
1,1,1-Trichloroethane				0.5 J						
Carbon Tetraehloride										
Bromodichkvomethane										
1,2-Dichloropropane										
cia-1,3-Dichloropropene										
Trichloroethene		0.05 J	2 J	120 E	7 J					
Dibromochloromethane										
1,1,2-Trichloroethane										
Benzene										
trara-1,3-Dichloropropene										
Bromoform										
4-Methyl-2-Pentanone										
2-Hexanone										
Tetrachloroethene				8 J						
1,1,2,2-Tetrachloroethane										
Toluene										
Chlorobenzene	0.2 J	0.2 J								
Ethylbenzene										
Styrene										
Xylenes (Total)										

NOTES:

Blank space - compound analyzed for but not detected
 B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
 E - estimated value
 J - estimated value, compound present below CRQL but above IDL
 R - analysis did not pass EPA QA/QC
 N - Presumptive evidence of the presence of the material
 NR - analysis not required
 Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-306
 SAMPLING DATE: 6/8/84
 EPA CASE NO.: 22276 LAB: ROSS

SEMI-VOLATILES

Sample ID No.

Traffic Report No.

Matrix

Unit

Dilution Factor/GPC Cleanup (Y)

Percent Moisture

DUP OF SS

	S1 BPD08 SOIL ug/kg	S2 BPD08 SOIL ug/kg	S3 BPD10 SOIL ug/kg	S4 BPD11 SOIL ug/kg	S5 BPD12 SOIL ug/kg	S6 BPD2S SOIL ug/kg	S7 BPD26 SOIL ug/kg	SW1 BPD27 WATER ug/L	SW2 BPD28 WATER ug/L
	1	1	1	1	1	1	1	1	1
	10	25	15	36	12	12	12	--	--
Phenol									
bis(2-Chloroethyl)ether									
2-Chlorophenol									
1,3-Dichlorobenzene									
1,4-Dichlorobenzene									
1,2-Dichlorobenzene									
2-Methylphenol									
2,2'-oxybis(1-Chloropropane)									
4-Methylphenol									
N-Nitroso-di-n-dipropylamine									
Hexachloroethane									
Nitrobenzene									
Isophorone									
2-Nitrophenol									
2,4-Dimethylphenol									
bis(2-Chloroethoxy)methane									
2,4-Dichlorophenol									
1,2,4-Trichlorobenzene				53 J					
Naphthalene	110 J	180 J	170 J	180 J					
4-Chloroaniline									
Hexachlorobutadiene									
4-Chloro-3-Methylphenol									
2-Methylnaphthalene	87 J	350 J	330 J	310 J					
Hexachlorocyclopentadiene									
2,4,6-Trichlorophenol									
2,4,8-Trichlorophenol									
2-Chloronaphthalene									
2-Nitroaniline									
Dimethylphthalate									
Acenaphthylene		24 J	300 J	S3 J					
2,0-Dinitrotoluene									
3-Nitroaniline									
Acenaphthene	210 J	60 J	74 J						
2,4-Dinitrophenol									
4-Nitrophenol									
Dibenzofuran	140 J	130 J	140 J	110 J					
2,4-Dinitrotoluene									
Diethylphthalate									
4-Chlorophenyl-phenyl ether									
Fluorene	150 J	56 J	53 J	48 J					
4-Nitroaniline									
4,0-Dinitro-2-methylphenol									
N-nitrosodiphenylamine									
4-Bromophenyl-phenyl ether									
Hexachlorobenzene									
Pentachlorophenol									
Pteruathrene	2200	880	880	700					0.4 J
Anthracene	380	85 J	240 J	81 J					

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-308
 SAMPLING DATE: 6/8/94
 EPA CASE NO.: 22276 LAB: ROSS

SEMI-VOLATILES

Sample ID No.	S1	S2	S3	S4	SS	S6	DUP OF S5 S7	SW1	SW2
Traffic Report No.	BPD08	BPD08	BPD10	BPD11	BPD12	BPD25	BPD26	BP027	BP028
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1	1	1	1	1	1	1	1	1
Percent Moisture	10	25	15	36	12	12	12	--	--
Carbazole	220 J	110 J	140 J	87 J					
Ol-n-butylphthalate			52 J	80 J		44 J		0.2 J	
Fluoranthene	4400	1500	5000	1400		200 J		0.2 J	0.6 J
Pyrene	2200	1100	2800	820		150 J			0.7 J
Butylbenzylphthalate		240 J	20 J	160 J		27 J			3 J
3,3'-Dichlorobenzidine									
Benzo(a)anthracene	1700	670	1800	590		81 J			
Chrysene	2000	1100	2300	810		130 J			
bis(2-Ethylhexyl)phthalate	48 J	1200	180 J	1100		140 J			
Di-n-octylphthalate									
Benzo(b)fluoranthene	2400	870	2500	810		110 J			
Benzo(k)fluoranthene	1300	760	1600	540		88 J			
Benzo(a)pyrene	1800	790	1400	520 J		100 J			
Indeno(1,2,3-cd)pyrene	1400	530	820			65 J			
Dibenz(a,h)anthracene	460		420						
Benzo(g,h,i)perylene	1100	480	400						

NOTES:

Blank space - compound analyzed for but not detected

B - compound found in lab blank as well as
 sample, indicates possible/probable
 blank contamination

E - estimated value

J - estimated value, compound present
 below CRQL but above IDL

R - analysis did not pass EPA QA/QC

N - Presumptive evidence of the presence
 of the material

NR - analysis rmt required

Detection limits elevated if Dilution

Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-308
 SAMPLING DATE: 6/8/94
 EPA CASE NO.: 22276 LAS: ROSS

SEMI-VOLATILES

Sample ID No.	SW3 BPD28 WATER ug/L	DUP OF SW3 SW4 BPD30 WATER ug/L	SWS BPG00 WATER ug/L	SED 1 BPD31 SEDIMENT ug/kg	SED2 BPD32 SEDIMENT ug/kg	SED3 BPD33 SEDIMENT ug/kg	SED5 BPG07 SEDIMENT ug/kg	RIN1 6PD34 WATER ug/L	RIN2 BPD83 WATER ug/L	TBI BPF99 WATER ug/L
Traffic Report No.	1	1	1	38	58	30	46	1	1	NA
Matrix	--	--	--					--	--	NA
Units										
Dilution Factor/GPC Cleanup (Y)										
Percent Moisture										
Phenol									2 J	NR
bis(2-Chloroethyl)ether										NR
2-Chlorophenol										NR
1,3-Dichlorobenzene										NR
1,4-Dichlorobenzene										NR
1,2-Dichlorobenzene										NR
2-Methylphenol										NR
2,2'-oxybis(1-Chloropropane)										NR
4-Methylphenol										NR
N-Nitroso-di-n-dipropylamine										NR
Hexachloroethane										NR
Nitrobenzene										NR
Isophorone										NR
2-Nitrophenol										NR
2,4-Dimethylphenol										NR
bis(2-Chloroethoxy)methane										NR
2,4-Dichlorophenol										NR
1,2,4-Trichlorobenzene				5400 J			63 J			NR
Naphthalene						35 J	480 J			NR
4-Chloroaniline										NR
Hexachlorobutadiene										NR
4-Chloro-3-Methylphenol										NR
2-Methylnaphthalene					23 J	43 J	450 J			NR
Hexachlorocyclopentadiene										NR
2,4,6-Trichlorophenol										NR
2,4,5-Trichlorophenol										NR
2-Chloronaphthalene										NR
2-Nitroaniline										NR
Dimethylphthalate						32 J				NR
Acenaphthylene							220 J			NR
2,6-Dinitrotoluene										NR
3-Nitroaniline										NR
Acenaphthene						27 J	830			NR
2,4-Dinitrophenol										NR
4-Nitrophenol										NR
Dibenzofuran						24 J	380 J			NR
2,4-Dinitrotoluene										NR
Diethylphthalate								0.5 JB	0.5 JB	NR
4-Chlorophenyl-phenyl ether										NR
Fluorene							540 J			NR
4-Nitroaniline										NR
4,6-Dinitro-2-methylphenol										NR
N-nitrosodiphenylamine										NR
4-Bromophenyl-phenyl ether										NR
Hexachlorobenzene										NR
Pentachlorophenol										NR
Phenanthrene				1 J	260 J	300 J	4000			NR
Anthracene					46 J	46 J	830			NR

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-308
 SAMPLING DATE: 6/8/94
 EPA CASE NO.: 22276 LAB: ROSS

SEMI-VOLATILES

Sample ID No.	SW3 BPD28 WATER	DUP OF SW3 SW4 BPD30 WATER	SWS BPG00 WATER	SED1 BPD31 SEDIMENT	SED2 BPD32 SEDIMENT	SED3 BPD33 SEDIMENT	SEDS BPG07 SEDIMENT	RIN1 BPD34 WATER	RIN2 BPD83 WATER	TB1 BPF90 WATER
Matrix	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1	1	1	1	1	1	1	1	1	1
Percent Moisture	--	--	--	38	56	30	46	--	--	NA
Carbazole						35 J	650			NR
Di-n-butylphthalate					280 J	120 J				NR
Fluoranthene			2 J	1400 J	720 J	630	7700			NR
Pyrene			2 J		480 J	430 J	6000			NR
Butylbenzylphthalate					8100	1100	2000			NR
3,3'-Dichlorobenzidine										NR
Benzo(a)anthracene			1 J		270 J	260 J	4000			NR
Chrysene			2 J		420 J	370 J	5100			NR
bis(2-Ethylhexyl)phthalate				8400 J	54000	9900	23000	1 JB	0.6 JB	NR
Di-n-octylphthalate					7600	690	1100			NR
Benzo(b)fluoranthene			2 J		450 J	400 J	8200			NR
Benzo(k)fluoranthene			0.6 J		320 J	190 J	4600			NR
Benzo(a)pyrene					300 J	280 J	5900			NR
Indeno(1,2,3-cd)pyrene							4700			NR
Dibenz(a,h)anthracene							2200			NR
Benzo(g,h,i)perylene							4500			NR

NOTES:

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 sample, indicates possible/probable
 blank contamination

E - estimated value

J - estimated value, compound present
 below CRQL but above IDL

R - analysis did not pass EPA QA/QC

N - Presumptive evidence of the presence
 of the material

NR - analysis not required

Detection limits elevated if Dilution

Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-306
 SAMPLE DATE: 6/8/94
 EPA CASE NO.: 22276 LAB: ROSS

PESTICIDES

Sample ID No.	S1	S2	S3	S4	SS	S6	DUP OF S5 S7	SW1	SW2
Traffic Report No.	BPD08	BPD09	BPD10	BPD11	BPD12	BPD2S	BPD26	BPD27	BPD28
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	10	10	10	10	10000	10	10000	1	1
Percent Moisture	10	25	15	36	12	12	12	--	--
alpha-BHC								0.011 J	R
beta-BHC									
delta-BHC								0.021 JN	0.021 J
gamma-BHC (Undane)									
Heptachlor									
Aldrin									
Heptachlor epoxide								0.073	R
Endosulfan I									
Dieldrin									R
4,4'-DDE								0.044 J	0.022 JN
Endrin								R	
Endosulfan II									
4,4'-DOD									
Endosulfan sulfate									
4,4'-DDT									0.021 JN
Methoxychlor									0.065 J
Endrin ketone									
Endrin aldehyde									
alpha-Chlordane									0.035 J
gamma-Chlordane								0.011 JN	0.04 J
Toxaphene									
Aroclor-1016									
Aroclor-1221									
Aroclor-1232									
Aroclor-1242									
Aroclor-1248									
Aroclor-1254	68000	110000	6000	20000	1100000	8200	1100000	2.1 E	1.0 E
Aroclor-1260									

NOTES:

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B - compound found in lab blank as well as sample, indicates possible/probable blank contamination

E - estimated value

J - estimated value, compound present below CRQL but above IOL

R - analysis did not pass EPA QA/QC

N - Presumptive evidence of the presence of the material

NR - analysis not required

Detection limits elevated if Dilution

Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS

PROJECT#: 8003-306

SAMPLING DATE: 6/8/84

EPA CASE NO.: 22276 LAB: ROSS

PESTICIDES

Sample ID No.	SW3	SW4	SWS	SED1	SED2	SED3	SED5	RIN1	RIN2	TBI
Traffic Report No.	BPD29	BPD30	BPG00	BPD31	BPD32	BPD33	BPG07	BPD34	BPD83	BPF09
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	WATER	WATER	WATER
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1	1	1	10	1	1	10	1	1	NA
Percent Moisture	--	--	--	38	56	30	46	--	--	NA
alpha-BHC	0.0S4 EN									NR
beta-BHC										NR
delta-BHC	0.028 J	0.028 J								NR
gamma-BHC (Lindane)										NR
Heptachlor										NR
Aldrin										NR
Heptachlor epoxide	0.017 JN	0.02 JN	0.8 EN							NR
Endosulfan I	0.20 E									NR
Oleldrin										NR
4,4'-DDE										NR
Endrin	0.12									NR
Endosulfan II										NR
4,4'-DDD										NR
Endosulfan sulfate										NR
4,4'-DDT										NR
Methoxychlor										NR
Endrin ketone										NR
Endrin aldehyde										NR
alpha-Chlordane										NR
gamma-Chlordane										NR
Toxaphene										NR
Aroclor-1016										NR
Aroclor-1221										NR
Aroclor-1232										NR
Aroclor-1242										NR
Aroclor-1248	24									NR
Aroclor-1254	20 EN 550000 3700 4500 51000									NR
Aroclor-1260										NR

NOTES:

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B - compound found in lab blank as well as sample, indicates possible/probable blank contamination

E - estimated value

J - estimated value, compound present below CRQL but above IOL

R - analysis did not pass EPA QA/QC

N - Presumptive evidence of the presence of the material

NR - analysis not required

Detection limits elevated if Dilution

Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS
 PROJECT#: 8003-306
 SAMPLING DATE: 6/8/94
 EPA CASE NO.: 22276
 LAB NAME: ITPA

INORGANICS Sample ID No. Traffic Report No. Matrix Units Dilution Factor	DUP OF 85									
	S1	S2	83	S4	S5	S6	S7	SW1	SW2	
	MBLF01	MBLF81	MBLF82	MBLF83	MBLF25	MBLF26	MBLF27	MBLF28	MBLF29	
	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	ug/L	
	1	1	1	1	1	1	1	1	1	
Aluminum	12500	3000	3440	7710	26800	7720	29100	2440	11300	
Antimony		3.9 J			25.4 E		16.8 E			
Arsenic	16.7	15.2	25.7	12.9	6.5	3.2	5.2	8.2 J	15.6 E	
Barium	138	207	535	290	224	44.9 J	255	161 J	344	
Beryllium	0.89 J	0.29 J	0.42 J	0.51 J	0.5 J	0.38 J	0.54 J	0.55 J	0.91 J	
Cadmium	1 J	1.3 J		4.7	33.2		36.7	3.2 J	14.5 E	
Calcium	2720	1520	601 J	6960	4700	570 J	6590	50600	55200	
Chromium	25.1	12.5	12	78.6	25.7	11.9	24.5	6.4 J	25.7	
Cobalt	16.6 E	3.9 J	7.8 J	15.1 J	9.2 J	5.1 J	10 J	4.8 J	13.1 J	
Copper	71.8 E	62.8 E	38.5 E	82.9 E	3020 E	30.5 E	1310 E	22.6 J	89.5	
Iron	28600	15900	23400	36200	28400	14700	26100	4800	19600	
Lead	178	348	198	419	2200	43.2	1990	35.4	180	
Magnesium	5840	584 J	1230	3220	3190	1730	4050	10000	12600	
Manganese	914	63.7	224	523	360	204	462	679	1380	
Mercury	2.4	0.98	0.24	2.9	0.47		0.76			
Nickel	57.7 E	23 E	15.2 E	31.7 E	31.4 E	13.1	31.4 E	20.3 J	40.8	
Potassium	2070	414 J	878 J	1350 J	1320	537 J	1410	3110 J	3950 J	
Selenium		2.4 E	2.5 E	1.4 J	1 J					
Silver	0.48 J	6.8	0.89 J	3.8	26.7	1.1 J	22.9		3.8 J	
Sodium	210 J	108 J	161 J	214 J	156 J	58.6 J	160 J	24800	24500	
Thallium									5.6 J	
Vanadium	205	98.9	29.2	56.7	30.5	18.1	30.2	10.3 J	32.4 J	
Zinc	176	R	R	317	1380	R	1040	713	994	

NOTES:

Blank space - compound analyzed for but not detected

E - estimated value

J - estimated value, compound present
 below CROL but above IDL

R - analysis did not pass EPA QA/QC

NR - analysis not required

SITE NAME: CORNELL DUBILIER ELECTRONICS

PROJECT#: 8003-306

SAMPLING DATE: 6/8/94

EPA CASE NO.: 22276

LAB NAME: ITPA

INORGANICS

Sample ID No.

Traffic Report No.

Matrix

Units

Dilution Factor

DUP OF SW3

	SWS MBLF30 WATER ug/L 1	SW4 MBLF31 WATER ug/L 1	SWS MBLF37 WATER ug/L 1	SED1 MBLF32 SEDIMENT mg/kg 1	SED2 MBLF33 SEDIMENT mg/kg 1	SED3 MBLF34 SEDIMENT mg/kg 1	SED5 MBLF38 SEDIMENT mg/kg 1	RIN1 MBLF35 WATER ug/L 1	RIN2 MBLF36 WATER ug/L 1
Aluminum	401	373	5800	12800	13600 E	13300	16800	39.1 J	103 J
Antimony				6.1 J					
Arsenic	3.9 J	4.6 J	9.2 J	9.2	13.8 E	10.4	24.2		2.9 J
Barium	114 J	117 J	366	225	317 E	256	366	0.96 J	1.1 J
Beryllium	0.2 J	0.16 J	0.5 J	0.73 J	1.1 J	0.85 J	1 J	0.31 J	0.16 J
Cadmium			8.2	14.4	22.6 E	10.3	24.8		
Calcium	46100	47400	38000	3740	6060 E	6380	7670	651 J	996 J
Chromium			27.1	28.5	39.1 E	38.7	56.6		
Cobalt	2.6 J	2.2 J	8.8 J	10.9 J	16.1 J	16.1 E	18.4 J	1.6 J	1.8 J
Copper	7.2 J	7.6 J	76.8	219 E	122 E	91.1 E	165 E		
Iron	1470	1500	9570	18300	24600 E	28600	31400	51.2 J	41.7 J
Lead	5.8	4.6	153	552	290 E	216	425		
Magnesium	8840	9050	8700	3190	4250 E	4950	6460	32.1 J	72 J
Manganese	409	416	907	539	847 E	1610	1390	1 J	1.6 J
Mercury			0.23	0.37	0.41 E	0.73	0.77		
Nickel	9.3 J	8.9 J	28 J	34.8 E	38.3 E	38.9 E	52.4 E		
Potassium	2500 J	2580 J	3170 J	1030 J	1150 J	1450 J	1470 J		
Selenium				1.2 J	1.6 J	1.6 E	1.9 E		
Silver			3.2 J	6.9	4.4 E	2.4 J	6.1		2.2 J
Sodium	24400	25100	17900	221 J	252 J	253 J	406 J	967 J	1100 J
Thallium									
Vanadium	4.8 J	4 J	46.5 J	35.5	41.7 E	42.6	85.8		
Zinc	62.1	51.8	838	453	430 E	350	798	142	97.5

NOTES:

Blank space - compound analyzed for but not detected

E - estimated value

J - estimated value, compound present

below CRDL but above IDL

R - analysis did not pass EPA QA/QC

NR - analysis not required

QUALITY ASSURED
EPA-MMB FINAL
CONTRACT LABORATORY DATA

SITE NAME: CORNELL DUBILIER

CASE NO./SAS NO.: 22276

TYPE OF ANALYSIS (circle one): VOA only

Full TCL

-- ROSS

Full TAL

-- ITPA

Full TAL and CN

SAS/Other _____

From: VALERIE SMITH

Sent to: ANDREW CLIBANOFF

Date Sent: 9/12/94

RECORD OF COMMUNICATION REGIONAL SAMPLE CONTROL CENTER

DATE: 7/26/94
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: RSCC/ESAT
TO: George Karras,
Toxic and Hazardous Waste Section

RECEIVED
SEP 2 1994

***Attached is the following ORGANIC Data Package
to be reviewed for Quality Assurance***

<u>SITE</u>	<u>CASE/SAS#</u>	<u>LAB</u>	<u>MATRIX</u>	<u># SAMPLES</u>
CORNELL DUBILIER ELECTRONICS	22276	ROSS	WATER	8
APER/SI			SOIL	11

REGION II RSCC DATA TRANSFER LOG

Relinquished By

Received By _____

Signature	Date/Time	Signature	Date/Time
Harry J. Randall III	7/20/94	Harry J. Randall III	7/13/94
John Balich	7/26/94	John Balich	7/29/94
Q DCR	8-1-94 2:30	DCR HJM	8/1/94
Brian McLean	8/17/94	Brian McLean	8/1/94
John Balich	8/29/94	DCR (Balich)	8/17/94
B. Mc L.	8/30/94	Balich	8/29/94
DCR HJM	9/2/94 9:47	DCR HJM	8/30
		S. Geraghty	9/2/94 9:47

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 22276 SDG No.: BPD08 & BPD27 LABORATORY: ROSS

SITE: Cornell Dubilier Electronic

DATA ASSESSMENT

The current Functional Guidelines for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detects), "R" (unusable), or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they can not be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

*Analytical data qualified as "JN" or "R" may not be used to demonstrate compliance with Toxicity Characteristic or Land Ban Regulations.

Reviewer's

Signature: Bruce McLean

Date: 08 / 15 / 1994

Verified By: G. Karas

Date: 9 / 02 / 1994

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

SDG# BPD0S -

VOA Fraction:

Analysis of samples BPD0S, 09, 09RE, 10, 10RE, 11, 12, 25, 26, 31, 32, 33 and BPG07 was preformed beyond holding time. All non-detects were qualified "UJ" and all detects were qualified "J".

DATA ASSESSMENT

2. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

SDG# BPD08 -

VOA Fraction:

Method blank VBLKZ2 -

Methylene chloride "U": BPD08,09,10,11,12,25,26 and 32;

Acetone "U": BPD08,09,10,11,12,25 and 26.

Method blank VBLKZ5 -

Methylene chloride and Acetone "U": BPD31,33 and BPG07;

Carbon Disulfide "U": BPD31 and 33;

Trichloroethene "U": BPG07.

BNA Fraction:

Method blank SBLKF4 -

bis(2-Ethylhexyl)phthalate "U": BPD26.

Method blank SBLKF4 TIC's -

BPD08,09,10 and 31 - RT: 6.06, 7.48 and 9.32 "R";

BPD11,25 and 32 - RT: 6.03 and 7.45 "R";

BPD26 - RT: 38.15 "R";

BPG07 - RT: 7.47 "R".

SDG# BPD27 -

BNA Fraction:

Method blank SBLKE1 -

Diethylphthalate "U": BPD27,28,29 and 30;

bis(2-Ethylhexyl)phthalate "U": BPD27,28,30,29 and 00.

Method blank SBLKF4 TIC's -

BPD27 - RT: 9.03, 34.77 and 40.88 "R";

BPD28,29 and BPG00 - RT: 9.03 and 34.67 "R".

B) Field or rinse blank contamination:

SDG# BPD27 -

VOA Fraction:

Rinse blanks BPD34 and 83 -

Methylene chloride "U": BPD27,29 and 30;

Acetone "U": BPD27,28,29,30 and BPG00.

DATA ASSESSMENT

2. BLANK CONTAMINATION: (continued)

C) Trip blank contamination:

SDG# BPD08 -

VOA Fraction:

Trip blank BPD99 -

Carbon Disulfide "U": BPD08,10,12,25 and 26.

DATA ASSESSMENT

3. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenylphosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems were found.

DATA ASSESSMENT

4. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) RESPONSE FACTOR:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

No problems were found.

DATA ASSESSMENT

5. CALIBRATION:

B) PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

Continuing Calibration (%D) -

SDG# BPD0S -

VOA Fraction:

Samples BPD0S, 09, 10, 11, 12, 25, 26 and 32 were qualified for the following compounds:

Bromomethane 25.4% "UJ";
Methylene chloride 33.9% "UJ".

BNA Fraction:

Samples BPD08, 09, 10, 26 and 31 were qualified for the following compounds:

2,2'-Oxybis(1-chloropropane) 32.3% "UJ";
2,4-Dinitrophenol 37.4% "UJ" and
4,6-Dinitro-2-Methylphenol "UJ" 29.2%.

Samples BPD11, 25, 32, 33 and BPG07 were qualified for the following compound:

2,4-Dinitrophenol 26.5% "UJ".

DATA ASSESSMENT

5. CALIBRATION: (continued)

SDG# BPD27 -

BNA Fraction:

Samples BPD27,28,29,30,34 and 83 were qualified for the following compounds:

4-Nitrophenol 48.3% "UJ";
Butylbenzylphthalate 33.4% "UJ";
bis(2-Ethylhexyl)Phthalate 29.5% "UJ";
Di-n-Octylphthalate 35.9% "UJ" and
Indeno(1,2,3-cd)pyrene 32.3% "UJ".

Sample BPG00 was qualified for the following compounds:

2,2'-Oxybis(1-chloropropane) 39.4% "UJ";
n-Nitroso-di-n-propylamine 27.0% "UJ";
4-Nitrophenol 30.0% "UJ" and
Benzo(g,h,i)perylene 26.2% "UJ".

DATA ASSESSMENT

6. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems were found.

DATA ASSESSMENT

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ± 30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to 100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

No problems were found.

DATA ASSESSMENT

8. COMPOUND IDENTIFICATION:

A) VOLATILE AND SEMI-VOLATILE FRACTIONS:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems were found.

B) PESTICIDE FRACTION:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

SDG# BPD27

Pest/PCB Fraction -

After careful review and using professional judgment the following compounds were qualified "U" and the CRQL was reported: *30* *OK 4/2/94*

BPD28 - Aldrin. ✓

BPG00 - Dieldrin, DDE, Methoxychlor, alpha-Chlordane and gamma-Chlordane. ✓

The following compounds were qualified "J" for a %D between 25 and 70%:

BPD27 - DDE and Aroclor 1254. ✓

BPD28 - delta-BHC, Methoxychlor, gamma-Chlordane and Aroclor 1254. ✓

BPD29 - delta-BHC. ✓

BPG00 - Endosulfan I. ✓

DATA ASSESSMENT

8. COMPOUND IDENTIFICATION:

SDG# BPD27

Pest/PCB Fraction -

The following compounds were qualified "JN" for a %D between 70 and 100%:

BPD27 - delta-BHC and gamma-Chlordane. ✓

- BPD28 - DDE and DDT. ✓

BPD29 and BPD30 - Heptachlor epoxide. ✓

BPG00 - alpha-BHC, Heptachlor epoxide and Aroclor 1254! ✓

The following compounds were qualified "R" for a %D >100%:

BPD27 - Endrin. ✓

BPD28 - Heptachlor epoxide and Dieldrin. ✓

DATA ASSESSMENT

9) MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

SDG# BPD05 -

VOA Fraction:

1 out of 10 compounds were outside of the QC limit for percent recovery. Using professional judgement no action was taken.

BNA Fraction:

2 out of 22 compounds for percent recovery and 2 out of 11 for %RPD were outside the QC limits. Using professional judgement no action was taken.

PEST/PCB:

2 out of 12 compounds were outside of the QC limit for percent recovery. Using professional judgement no action was taken.

SDG# BPD27 -

BNA Fraction:

3 out of 22 compounds were outside of the QC limit for percent recovery. Using professional judgement no action was taken.

DATA ASSESSMENT

10) OTHER QC OUT OF SPECIFICATION:

11) SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

All Pest/PCB soil samples contained Aroclor 1254 in high concentrations. Peaks from this PCB were seen in all BNA TIC searches.

12) CONTRACT PROBLEMS NON-COMPLIANCE:

13) This package contains re-extraction, reanalysis or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified to be used.

SDG# BPD0S -

VOA Fraction:

Use the data from the analysis of samples BPD09 and 10 not BPD09RE and BPD10RE.

BNA Fraction:

Use the data from the analysis of samples BPD08, 10, 32, 33 and BPG07 not BPD08DL, 10DL, 32DL, 33DL and BPG07DL.

Pest/PCB Fraction:

Use the data from the analysis of samples BPD08, 09, 10, 11, 12DL, 25, 26DL, 31, 32, 33 and BPG07 not BPD08DL, 09DL, 10DL, 11DL, 12, 25DL, 26, 31DL, 32DL, 33DL and BPG07DL.

REJECTION SUMMARY FORM
(No. of Compounds/No. of Fractions (Samples))

Type of Review: Organic Date: 8/29/99 Case #: 22276
Project: Cornell Dubilier Electronic Lab Name: AATSLA
Reviewer's Initials: BN Number of Samples: 19

Analytes Rejected Due to Exceeding Review Criteria:

	Surrogates	Holding Time	Calibration	Contamination	ID	Other	Total # Samples	Total # Rejected/ Total # in all Samples
Acids (15)							19	
B/N (50)							19	
VDA (35)							19	
PEST (20)					$\frac{4}{10}$		19	$\frac{4}{380}$
ICB (7)							19	
ICDD (1)							—	

Analytes Estimated Due to Exceeding Review Criteria for:

Acids (15)			$\frac{17}{150}$				19	$\frac{17}{285}$
B/N (50)			$\frac{37}{500}$				19	$\frac{37}{950}$
VOA (35)		$\frac{385}{385}$	$\frac{24}{350}$				19	$\frac{411}{605}$
PEST (20)					$\frac{14}{100}$		19	$\frac{14}{280}$
ICB (7)					$\frac{3}{21}$		19	$\frac{3}{133}$
TCDD (1)							—	

DPO: ☐ ACTION ☐ FYIRegion IIORGANIC REGIONAL DATA ASSESSMENT SUMMARYCASE NO. 22276LABORATORY R HATSLITSDG NO. BPOCBT BPO27DATA USER APER/SE

SOW _____

REVIEW COMPLETION DATE 8/29/94NO. OF SAMPLES 8 WATER 11 SOIL _____ OTHER _____REVIEWER ☐ ESD ☒ ESAT ☐ OTHER, CONTRACT/CONTRACTOR _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>M</u>	<u>0</u>	<u>0</u>	_____
2. GC-MS TUNE/ GC PERFORMANCE	<u>0</u>	<u> </u>	_____	_____
3. INITIAL CALIBRATIONS	<u> </u>	<u> </u>	<u>0</u>	_____
4. CONTINUING CALIBRATIONS	<u> </u>	<u> </u>	<u> </u>	_____
5. FIELD BLANKS (F = not applicable)	<u> </u>	<u> </u>	<u> </u>	_____
6. LABORATORY BLANKS	<u> </u>	<u> </u>	<u> </u>	_____
7. SURROGATES	<u> </u>	<u> </u>	<u> </u>	_____
8. MATRIX SPIKE/ DUPLICATES	<u> </u>	<u> </u>	<u> </u>	_____
9. REGIONAL QC (F = not applicable)	<u>F</u>	<u>F</u>	<u>F</u>	_____
10. INTERNAL STANDARDS	<u>0</u>	<u>0</u>	_____	_____
11. COMPOUND IDENTIFICATION	<u> </u>	<u> </u>	<u>0</u>	_____
12. COMPOUND QUANTITATION	<u> </u>	<u> </u>	<u> </u>	_____
13. SYSTEM PERFORMANCE	<u> </u>	<u> </u>	<u> </u>	_____
14. OVERALL ASSESSMENT	<u> </u>	<u> </u>	<u> </u>	_____

O = No problems or minor problems that do not affect data usability.

X = No more than about 5% of the data points are qualified as either estimated or unusable.

M = More than about 5% of the data points are qualified as estimated.

Z = More than about 5% of the data points are qualified as unusable. (R)

DPO ACTION ITEMS: _____

AREAS OF CONCERN: _____



Ross Analytical Services, Inc.
16433 Foltz Industrial Parkway • Strongsville, Ohio 44136
(216) 572-3200 • Fax (216) 572-7620 • 1-800-325-7737

RECEIVED
JUL 13 1994

July 12, 1994

Richard Spear
USEPA Region II, ESD
Woodbridge Avenue
Building 209
Edison, NJ 08837

Contract No. 68-D2-0014, Bid Lot A
Narrative for Case 22276, SDG BPD27

Dear Richard:

This is the Narrative for the SDG referenced above. The SDG contained eight (8) waters numbered BPD27-30, BPD34, BPD83, BPF99 & BPG00. The samples were received on June 9, 1994.

The samples were analyzed for the full TCL except for sample BPF99 which was analyzed for the VOA fraction only.

VOA Fraction:

No comments.

BNA Fraction:

No comments.

Pesticide/PCB Fraction:

No comment.

The multi component pattern recognition standards for aroclor 1248 and 1254 were analyzed on June 20, 1994.

000002

The Nelson Analytical Data System which we use cannot print the nanograms on column information for the pesticide/PCB fraction. This information is included after the Form X's and before the calibration raw data.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and the computer readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Respectively,

Dale L. Mori 7/12/94

Dale L. Mori
CLP Project Manager

Please send any CCS and other communications to me.

Thank you.

Dale L. Mori 7/12/94

Dale L. Mori
CLP Project Manager

SOP NO. HW-6
Revision #8

CLP ORGANISMS DATA REVIEW
AND PRELIMINARY REVIEW

BY: Leon Lazarus
Leon Lazarus, Environmental Scientist
Toxic and Hazardous Waste Section

Date: January 2, 1992

BY: George Karras
George Karras, Chemist
Toxic and Hazardous Waste Section

Date: January 3, 1992

BY: Stelios Gerazounis
Stelios Gerazounis, Chemist
Toxic and Hazardous Waste Section

Date: 1/3/92

CONCURRED BY: Kevin W. Rubik
Kevin Rubik, Chief
Toxic and Hazardous Waste Section

Date: 1/3/92

APPROVED BY: Robert Runyon
Robert Runyon, Chief
Monitoring Management Branch

Date: 1/7/92

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 22276

LAB: ROSS

SITE: Cornell Dubilier Electronic

1.0 Data Completeness and Deliverables

- 1.1 Have any missing deliverables been received and added to the data package? 1 1 1

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

- 1.2 Was SMO CCS checklist included with package? 1 1 1

2.0 Cover Letter SDG Narrative

- 2.1 Is the Narrative or Cover Letter Present? 1 1 1

- 2.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? 1 1 1

3.0 Data Validation Checklist

The following checklist is divided into three parts. Part A is filled out if the data package contains any VOA analyses, Part B for any BNA analyses and Part C for Pesticide/PCBs.

Does this package contain:

VOA Data? X 1 1

BNA Data? X 1 1

Pesticide/PCB data? X 1 1

Action: Complete corresponding parts of checklist.

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

PART A: VOA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

- 1.1 Are the Traffic Report Forms present for all samples? ☒ ☐ ☐

ACTION: If no, contact lab for replacement of missing or illegible copies.

- 1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ☐ ☒ ☐

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated (J). If a soil sample other than TCLP contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all Non-Detects "UJ".

ACTION: If both VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

2.0 Holding Times

2.1 Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded? X 11

If unpreserved, aqueous samples maintained at 4°C which are to be analyzed for aromatic hydrocarbons must be analyzed within 7 days of collection. If preserved with HCl (pH<2) and stored at 4°C, then aqueous samples must be analyzed within 14 days of collection. If uncertain about preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

Sample ID	Sample Matrix	Preserved?	(See Traffic Report)		
			Date Sampled	Date Lab Received	Date Analyzed
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

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YES NO N/A

3.0 System Monitoring Compound (SMC) Recovery (Form II)

3.1 Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water	<input checked="" type="checkbox"/>	___	___
b. Low Soil	<input checked="" type="checkbox"/>	___	___
c. Med Soil	<input type="checkbox"/>	___	<input checked="" type="checkbox"/>

3.2 Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:

a. Low Water	<input checked="" type="checkbox"/>	___	___
b. Low Soil	<input checked="" type="checkbox"/>	___	___
c. Med Soil	<input type="checkbox"/>	___	<input checked="" type="checkbox"/>

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk?

<input checked="" type="checkbox"/>	___	___
-------------------------------------	-----	-----

ACTION: Circle all outliers in red.

3.4 Was one or more VOA system nonitoring compound recovery outside of contract specifications for any sample or method blank?

___	<input checked="" type="checkbox"/>	___
-----	-------------------------------------	-----

If yes, were samples re-analyzed?

<input type="checkbox"/>	___	___
--------------------------	-----	-----

Were method blanks re-analyzed?

<input type="checkbox"/>	___	___
--------------------------	-----	-----

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YES NO N/A

ACTION: If recoveries are > 10% but 1 or more compounds fail to meet SOW specifications:

1. All positive results are qualified as estimated (J).
2. Flag all non-detects as estimated detection limits ("UJ") where recovery is less than the lower acceptance limit.
3. If SMC recoveries are above allowable levels, do not qualify non-detects.

If any system monitoring compound recovery is <10% :

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as unusable ("R").

Professional judgement should be used to qualify data that only have method blank SMC recoveries out of specification in both original and re-analyses. Check the internal standard areas.

- 3.5 Are there any transcription/calculation errors between raw data and Form II? (X)

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spikes (Form III)

- 4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? 1

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YES NO N/A

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:

a.	Low Water	<u>1</u>	___	___
b.	Low Soil	<u>1</u>	___	___
c.	Med Soil	<u>1</u>	___	<u>X</u>

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many VOA spike recoveries are outside QC limits?

<u>Water</u>	<u>Spils</u>
<u>0</u> out of 10	<u>1</u> out of 10

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

<u>Water</u>	<u>Soils</u>
<u>0</u> out of 5	<u>1</u> out of 5

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the MS/MSD results may be used in conjunction with other QC criteria to determine the need for qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present?

(X) ___ ___

5.2 Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?

(X) ___ ___

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YES NO N/A

- 5.3 Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used? 1X1

ACTION: If any method blank data are missing, call lab for explanation/ resubmittal. If method blank data are not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank or trip blank data for missing method blank data.

- 5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra.

Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs? 1X1

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

- 6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture when necessary. X 11

- 6.2 Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)? X 11

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

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YES NO N/A

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Blanks may not be qualified because of contamination in another blank. Field Blanks & Trip Blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R).

	Sample conc > CRQL but < 10x blank value	Sample conc < CRQL & <10x blank value	Sample conc > CRQL & >10x blank value
Methylene Chloride Acetone Toluene 2-Butanone	Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

	Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL value & > 5x blank value
Other Contam- inants	Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

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YES NO N/A

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated associated blank, flag the sample data "R" (unusable).

- 6.3 Are there field/rinse/equipment blanks associated with every sample?

☒ 1 — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 GC/MS Instrument Performance Check (Form V)

- 7.1 Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)?

☒ 1 — —

- 7.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?

☒ 1 — —

- 7.3 Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?

☒ 1 — —

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YES NO N/A

ACTION: List date, time, instrument ID, and sample analysis for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

- 7.4 Have the ion abundances been normalized to m/z 95? ☒ _____

ACTION: If mass assignment is in error, qualify all associated data as unusable (R).

- 7.5 Have the ion abundance criteria been met for each instrument used? ☒ _____

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

- 7.6 Are there any transcription/calculation errors between nass lists and Form Vs? (Check at least two values but if errors are found, check more.) _____ ☒ _____

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	YES	NO	N/A
7.7 Have the appropriate number of significant figures (two) been reported?	<input checked="" type="checkbox"/>	___	___
ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.			
7.8 Are the spectra of the mass calibration compound acceptable?	<input checked="" type="checkbox"/>	___	___
ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.			
8.0 <u>Target Compound List (TCL) Analytes</u>			
8.1 Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
a. Samples and/or fractions as appropriate	<input checked="" type="checkbox"/>	___	___
b. Matrix spikes and matrix spike duplicates	<input checked="" type="checkbox"/>	___	___
c. Blanks	<input checked="" type="checkbox"/>	___	___
8.2 Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
a. Samples and/or fractions as appropriate	<input checked="" type="checkbox"/>	___	___
b. Matrix spikes and matrix spike duplicates (Mass spectra not required)	<input checked="" type="checkbox"/>	___	___
c. Blanks	<input checked="" type="checkbox"/>	___	___
ACTION: If any data are missing, take action specified in 3.2 above.			

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	YES	NO	N/A
8.3 Are the response factors shown in the Quant Report?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resolution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peak shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Full-scale graph (attenuation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACTION: Use professional judgement to determine the acceptability of the data.			
8.5 Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance".			
8.6 Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.7 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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YES NO N/A

- 8.8 Do sample and standard relative ion intensities agree within 20%? ☒ ☐ ☐

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.6, 8.7, and 8.8.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

- 9.1 Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier? ☒ ☐ ☐
- 9.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:
- a. Samples and/or fractions as appropriate ☒ ☐ ☐
- b. Blanks ☒ ☐ ☐

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

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YES NO N/A

- 9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene- a VOA TCL analyte - and should not be reported as a TIC)? X

ACTION: Flag with "R" any TCL compound listed as a TIC.

- 9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum? X

- 9.5 Do TIC and "best match" standard relative ion intensities agree within 20%? X

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate.

Also, when a compound is not found in any blank, but is detected in a sample and is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R). (i.e. Common Lab Contaminants: CO, (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

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YES NO N/A

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? _____ [X] _____

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? [X] _____

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant. Reports) present for initial and continuing calibration? [X] _____

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

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YES NO N/A

12.0 GC/MS Initial Calibration (Form VI)

- 12.1 Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/l? Are there separate calibrations for low water/ened soils and low soil samples? ☒ _____

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

- 12.2 Were all low level soil standards, blanks and samples analyzed by heated purge? ☒ _____

ACTION: If low level soil samples were not heated during purge, qualify positive hits "J" and non-detects "R".

- 12.3 Are response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30.0%)? ☒ _____

ACTION: Circle all outliers in red.

NOTE: Although 11 VOA compounds have a minimum RRF and no maximum %RSD, the technical criteria are the same for all analytes.

ACTION: If %RSD > 30.0%, qualify associated positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non-detects for that analyte R (unusable).

NOTE: Analytes previously qualified "U" for blank contamination are still considered as "hits" when qualifying for initial calibration criteria.

- 12.4 Are the RRFs above 0.05? ☒ _____

Action: Circle all outliers in red.

Action: If any RRF are < 0.05, qualify associated non-detects (R) and flag associated positive data as estimated (J).

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Revision: 8

YES NO N/A

- 12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD? (Check at least 2 values, but if errors are found, check more.)

___ [X] ___

13.0 GC/MS Continuing Calibration (Form VII)

- 13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?

[X] ___

- 13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?

[X] ___

ACTION: List below all sample analyses that were not within twelve hours of the previous continuing calibration analysis.

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

- 13.3 Do any volatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the $\pm 25\%$ criteria?

X [] ___

ACTION: Circle all outliers in red.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated. When % D is above 90%, reject all non-detects for that analyte (R) unusable.

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YES NO N/A

13.4 Do any volatile compounds have a RRF <0.05? 14 ✓ —

ACTION: Circle all outliers in red.

ACTION: If the RRF <0.05, qualify associated non-detects as unusable (R) and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check none.) — (X) —

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

14.0 Internal Standard (Form VIII)14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration? 11 X —

ACTION: List all the outliers below.

Sample #	Internal Std	Area	Lower Limit	Upper Limit
BPD09RF	chl...	105	139.221	
BPD09RF	"	129.15		
BPD09RF	chl...	24.11	30.662	122.552
"	chl...	94.09		
BPD09RF		115		

(Attach additional sheets if necessary.)

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YES NO N/A

- ACTION: 1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.
2. Non-detects associated with IS area counts > 100% should not be qualified.
3. If IS area is below the lower limit (< 50%), qualify all associated non-detects (U values) "J". If extremely low area counts are reported, (< 25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable ("R").

14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard?

1X1 — —

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for VOA analysis?

11 X —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

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YES NO N/A

PART B: BNA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

- 1.1 Are the Traffic Report Forms present for all samples? [X]

ACTION: If no, contact lab for replacement of missing or illegible copies.

- 1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data? [X]

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated ("J"). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

- 2.1 Have any BNA technical holding times, determined from date of collection to date of extraction, been exceeded? [X]

Continuous extraction of water samples for BNA analysis must be started within seven days of the date of collection. Soil/sediment samples must be extracted within 7 days of collection. Extracts must be analyzed within 40 days of the date of extraction.

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YES NO N/A

Table of Holding Time Violations

Sample	Sample Matrix	Date Sampled	(See Traffic Report)		Date Analyzed
			Date Lab Received	Date Extracted	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded.

If analyses were done more than 14 days beyond holding time, either on the first analysis or upon reanalysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results should be qualified "J", but the reviewer may determine that non-detect data are unusable ("R"). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the BNA Surrogate Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water

[X] _____

b. Low Soil

[X] _____

c. Med Soil

[X] _____

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YES NO N/A

3.2 Are all the BNA samples listed on the appropriate Surrogate Recovery Summaries for each of the following matrices:

- | | | | |
|--------------|-------------------------------------|-----|-----|
| a. Low Water | <input checked="" type="checkbox"/> | ___ | ___ |
| b. Low Soil | <input checked="" type="checkbox"/> | ___ | ___ |
| c. Low Soil | <input checked="" type="checkbox"/> | ___ | ___ |

ACTION: Call lab for explanation/resubmittals.
If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk? ☐ ___ ☒

ACTION: Circle all outliers in red.

3.4 Were two or more base-neutral OR acid surrogate recoveries out of specification for any sample or method blank? ☐ ☒ ___

If yes, were samples reanalyzed? ☐ ___ ___

Were method blanks reanalyzed? ☐ ___ ___

ACTION: If all BNA surrogate recoveries are > 10% but two within the base-neutral or acid fraction do not meet SOW specifications, for the affected fraction only (i.e. base-neutral or acid compounds):

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as estimated detection limits ("UJ") when recoveries are less than the lower acceptance limit.
3. If recoveries are greater than the upper acceptance limit, do not qualify non-detects.

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Date: January 1992

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YES NO N/A

If any base-neutral or acid surrogate has a recovery of <10%:

1. Positive results for the fraction with <10% surrogate recovery are qualified with "J".
2. Non-detects for that fraction should be qualified as unusable (R).

Professional judgement should be used to qualify data that have method blank surrogate recoveries out of specification in both original and reanalyses. Check the internal standard areas.

- 3.5 Are there any transcription/calculation errors between raw data and Form II? 1X1

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

4.0 Matrix Spikes (Form III)

- 4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? 1X1
- 4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:
- a. Low Water 1X1
 - b. Low Soil 1X1
 - c. Med Soil 1X1

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

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Date: January 1992

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YES NO N/A

- 4.3 How many BNA spike recoveries are outside QC limits?

Water

Soils

3 out of 22

2 out of 22

- 4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water

Soils

2 out of 11

2 out of 11

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

- 5.1 Is the Method Blank Summary (Form IV) present? ☒ 1 1

5.2 Frequency of Analysis:

Has a reagent/method blank analysis been reported per 20 samples of similar matrix, or concentration level, and for each extraction batch?

☒ 1 1

- 5.3 Has a BNA method blank been analyzed for each GC/MS system used?
(See SOW p. D - 59/SV, Section 8.7)

☒ 1 1

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If not available, use professional judgement to determine if the associated sample data should be qualified.

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YES NO N/A

- 5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra.

Is the chromatographic performance (baseline stability) for each instrument acceptable for BNAs?

☒ ☐ ☐

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

Note: "Water blanks", "drill blanks" and "distilled water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

- 6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for BNAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for moisture where necessary.

☒ ☐ ☐

- 6.2 Do any field/rinse/ blanks have positive BNA results (TCL and/or TIC)?

☒ ☐ ☐

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

Note: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field Blanks must be qualified for surrogate, spectral, instrument performance or calibration QC problems.

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Date: January 1992

Revision: 8

YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If gross contamination exists, all data in the associated samples should be qualified as unusable (R).

Sample conc > CRQL but < 10x blank	Sample conc < CRQL & is < 10x blank value	Sample conc > CRQL value & > 10x blank
---------------------------------------	--	---

Common Phthalate Esters

Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed
-----------------------------------	------------------------------	-------------------------------

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL value & > 5 blank value
--------------------------------------	---	---

Other Contaminants

Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed
-----------------------------------	------------------------------	-------------------------------

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated associated blank, flag the sample data "R" (unusable).

- 6.3 Are there field/rinse/equipment blanks associated with every sample?

IXI — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

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YES NO N/A

7.0 GC/MS Instrument Performance Check7.1 Are the GC/MS Instrument Performance Check Forms (Form V) present for Decafluorotriphenylphosphine (DFTPP)? ☒ ☐ ☐7.2 Are the enhanced bar graph spectrum and mass/charge (n/z) listing for the DFTPP provided for each twelve hour shift? ☒ ☐ ☐7.3 Has an instrument performance check solution been analyzed for every twelve hours of sample analysis per instrument? ☒ ☐ ☐

ACTION: List date, time, instrument ID, and sample analyses for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

ACTION: If mass assignment is in error, flag all associated sample data as unusable (R).

7.4 Have the ion abundances been normalized to m/z 198? ☒ ☐ ☐

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YES NO N/A

- 7.5 Have the ion abundance criteria been met for each instrument used? ☒ ☐ ☐

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

- 7.6 Are there any transcription/calculation errors between mass lists and Form Vs? (Check at least two values but if errors are found, check none.) ☐ ☒ ☐

- 7.7 Have the appropriate number of significant figures (two) been reported? ☒ ☐ ☐

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

- 7.8 Are the spectra of the mass calibration compound acceptable? ☒ ☐ ☐

ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.

8.0 Target Compound List (TCL) Analytes

- 8.1 Are the Organic Analysis Data Sheets (Form I BNA) present with required header information on each page, for each of the following:

a. Samples and/or fractions as appropriate ☒ ☐ ☐

b. Matrix spikes and matrix spike duplicates ☒ ☐ ☐

c. Blanks ☒ ☐ ☐

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YES NO N/A

- 8.2 Has GPC cleanup been performed on all soil/
sediment sample extracts?

☒ ☐ ☐

ACTION: If data suggests that GPC was not
performed, use professional judgement.
Make note in "Contract
Problems/Non-Compliance".

- 8.3 Are the BNA Reconstructed Ion Chromatograms,
the mass spectra for the identified compounds,
and the data system printouts (Quant Reports)
included in the sample package for each of the
following?

a. Samples and/or fractions as appropriate

☒ ☐ ☐

b. Matrix spikes and matrix spike duplicates
(Mass spectra not required)

☒ ☐ ☐

c. Blanks

☒ ☐ ☐

ACTION: If any data are missing, take action
specified in 3.2 above.

- 8.4 Are the response factors shown in the Quant
Report?

☐ ☒ ☐

- 8.5 Is chromatographic performance acceptable with
respect to:

Baseline stability?

☒ ☐ ☐

Resolution?

☒ ☐ ☐

Peak shape?

☒ ☐ ☐

Full-scale graph (attenuation)?

☒ ☐ ☐

Other: _____

☐ ☐ ☐

ACTION: Use professional judgement to determine
the acceptability of the data.

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YES NO N/A

- 8.6 Are the lab-generated standard mass spectra of identified BNA compounds present for each sample? ☒ — —

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance". If spectra are missing, reject all positive data.

- 8.7 Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration? ☒ — —

- 8.8 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum? ☒ — —

- 8.9 Do sample and standard relative ion intensities agree within 20%? ☒ — —

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (Presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.7, 8.8, and 8.9.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

- 9.1 Are all Tentatively Identified Compound Forms (Form I, Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier? ☒ — —

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YES NO N/A

9.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:

a. Samples and/or fractions as appropriate ☒ — —

b. Blanks ☒ — —

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene a VOA TCL - and should not be reported as a TIC)? — ☒ —

ACTION: Flag with "R" any TCL compound listed as a TIC.

9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum? ☒ — —

9.5 Do TIC and "best match" standard relative ion intensities agree within 20%? ☒ — —

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate. Also, when a compound is not found in any blank, but is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R).

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YES NO N/A

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? [X]

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? [X]

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and it's associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant, Reports) present for initial and continuing calibration? [X]

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

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YES NO N/A

12.0 GC/MS Initial Calibration (Form VI)

- 12.1 Are the Initial Calibration Forms (Form VI) present and complete for the BNA fraction? IX1 — —

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

- 12.2 Are response factors stable for BNAs over the concentration range of the calibration? (% Relative standard deviation (%RSD) < 30.0%) IX1 — —

ACTION: Circle all outliers in red.

NOTE: Although 20 BNA compounds have a minimum RRF and no maximum %RSD, the technical criteria are the same for all analytes.

ACTION: If the % RSD is > 30.0%, qualify positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non-detect results for that analyte R (unusable).

NOTE: Analytes previously qualified "U" due to blank contamination are still considered as "hits" when qualifying for calibration criteria.

- 12.3 Are all BNA compound RRFs > 0.05? IX1 — —

ACTION: Circle all outliers in red.

ACTION: If any RRF < 0.05
1. "R" all non-detects.
2. "J" all positive results.

- 12.4 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or % RSD? (Check at least two values but if errors are found, check more.) IX1 — —

ACTION: Circle Errors in red.

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YES NO N/A

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors in data assessments.

13.0 GG/MS Continuing Calibration (Form VII)

13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the BNA fraction? ☒ 1 _ _

13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument? ☒ 1 _ _

ACTION: List below all sample analyses that were not within twelve hours of a continuing calibration analysis for each instrument used.

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

13.3 Do any semivolatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the + 25.0% criteria? ☒ 1 1 _

ACTION: Circle all outliers in red.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated (J). When %D is above 90%, reject all non-detects for that analyte (R) unusable.

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YES NO N/A

13.4 Do any semivolatile compounds have a RRF <0.05? [X]

ACTION: Circle all outliers in red.

ACTION: if RRF <0.05, qualify as unusable (R) associated non-detects and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or % difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check none). [X]

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

14.0 Internal Standards (Form VIII).

14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration? [X]

ACTION: List all the outliers below.

Sample #	Internal Std	Area	Lower Limit	Upper Limit
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(Attach additional sheets if necessary.)

ACTION: 1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results and non-detects (U values) quantitated with this internal standard.

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YES NO N/A

2. Non-detects associated with IS areas > 100% should not be qualified.
3. If the IS area is below the lower limit (<50%), qualify all associated non-detects (U-values) "J". If extremely low area counts are reported (<25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable (R).

- 14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard? ☒ — —

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

- 15.1 Were any field duplicates submitted for BNA analysis? 11 X —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

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YES NO N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

- 1.1 Are Traffic Report Forms present for all samples? M

ACTION: If no, contact lab for replacement of missing or illegible copies.

- 1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? X

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated (J). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

- 2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? X

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

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YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits (UJ) and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?

a. Low Water

☒ ☐ ☐

b. Soil

☒ ☐ ☐

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?

a. Low Water

☒ ☐ ☐

b. Soil

☒ ☐ ☐

ACTION: Call lab for explanation/resubmittals.
If missing deliverables are unavailable,
document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk?

☒ ☐ ☐

ACTION: Circle all outliers in red.

3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%)

☒ ☐ ☐

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YES NO N/A

ACTION: No qualification is done if surrogates are diluted out. If recovery for both surrogates is below the contract limit, but above 10%, flag all results for that sample 'J'. If recovery is < 10% for either surrogate, qualify positive results 'J' and flag non-detects 'R'. If recovery is above the contract advisory limits for both surrogates qualify positive values 'J'.

- 3.5 Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A? ☒ ☐ ☐

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.

- 3.6 Are there any transcription/calculation errors between raw data and Form II? ☐ ☒ ☐

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.

4.0 Matrix Spikes (Form III)

- 4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? ☒ ☐ ☐

- 4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices?
(1 MS/MSD must be performed for every 20 samples of similar matrix or concentration level)

a. Low Water ☒ ☐ ☐

b. Soil ☒ ☐ ☐

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

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YES NO N/A

- 4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water

Soil

 out of 12

 out of 12

- 4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water

Soil

 out of 6

 out of 6

ACTION: No action is taken on MS/MSO data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

- 5.1 Is the Method Blank Summary (Form IV) present? ☒

- 5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? ☒

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

- 5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence? (minimum contract requirement)

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YES NO N/A

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

- 5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? (X)

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

- 6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. (X)

- 6.2 Do any field/rinse blanks have positive PEST/PCB results? X

ACTION: Prepare a list of the samples associated with each of the contaminated blanks.
(Attach a separate sheet)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

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YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U":	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

- 6.3 Are there field/rinse/equipment blanks associated with every sample? ☒ — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

- 7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?

a. peak resolution check	<input checked="" type="checkbox"/>	—	—
b. performance evaluation mixtures	<input checked="" type="checkbox"/>	—	—
c. aroclor 1016/1260	<input checked="" type="checkbox"/>	—	—
d. aroclors 1221, 1232, 1242, 1248, 1254	<input checked="" type="checkbox"/>	—	—
e. toxaphene	<input checked="" type="checkbox"/>	—	—
f. low points individual mixtures A & B	<input checked="" type="checkbox"/>	—	—
g. med points individual mixtures A & B	<input checked="" type="checkbox"/>	—	—
h. high points individual mixtures A & B	<input checked="" type="checkbox"/>	—	—

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YES NO N/A

1. instrument blanks

☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above.

7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence? ☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Forms VI? ☐ ☒ ☐

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1). ☒ ☐ ☐

ACTION: If no, all samples in the entire analytical sequence are potentially affected. Check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).
For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual pattern.

7.5 Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0 % RSD). See Form VI PEST - 2. ☒ ☐ ☐

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YES NO N/A

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

- 7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4)

☒ — —

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

- 7.7 Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns?

☒ — —

ACTION: If no, take action as specified in 3.2 above.

- 7.8 Has the individual % breakdown exceeded 20.0% on either column.

— ☒ —

- for 4,4' - DDT?

— ☒ —

- for endrin?

— ☒ —

Has the combined % breakdown for 4,4'- DDT/ Endrin exceeded 30.0% on either column? (required in all instances)

— ☒ —

ACTION: 1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytical sequence as described below.

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2. If any % breakdown has failed the QC criteria in a PEM Verification calibration, review data beginning with the samples which followed the last in-control standard until the next acceptable PEM % and qualify the data as described below.
 - a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.0%:
 - i. Qualify all positive results for DDT with "J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).
 - ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).
 - b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:
 - i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R).
 - ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ).
 - c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:
 - i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

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YES NO N/A

- ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

7.9 Are the relative percent difference (RPD) values for all PEM analytes <25.0%? (Form VII-PEST-1) ☒ _____

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration, all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank? ☒ _____

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.

7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed? ☒ _____

ACTION: If no, take action specified in 3.2 above.

7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2? _____ ☒ _____

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".

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YES NO N/A

- 7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence? 1 — —

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).

- 7.14 Are RPD values for all verification calibration standard compounds < 25.0%? X — —

ACTION: If the RPD is >25.0% for the compound being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria. If the RPD is >90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

- 8.1 Is Form VIII present and complete for each column and each period of analyses? X — —

ACTION: If no, take action specified in 3.2 above.

- 8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? (see CLP SOW p. D-39 & D-41/PEST) X — —

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

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YES NO N/A

9.0 Cleanup Efficiency Verification (Form IX)

- 9.1 Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.) ☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".

- 9.2 Are all samples listed on the Pesticide Florisil Cartridge Check Form? ☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above.

- 9.3 If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present? ☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above.

ACTION: If GPC was not performed when required, make note in "Contract Problems/Non-Compliance" section of data assessment.

- 9.4 Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:

80-120% for florisil cartridge check? ☒ ☐ ☐

80-110% for GPC calibration? ☒ ☐ ☐

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Check analysis. Make note in Contract Problems/Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for pattern similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected? ☒ ☐ ☐

ACTION: If no, take action specified in 3.2 above.

10.2 Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 80, 9A, B, 10A. ☒ ☐

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".

10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses? ☒ ☐

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)? ☐ ☒

Action: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.

STANDARD OPERATING PROCEDURE

Date: January 1992
Revision: 8

YES NO N/A

- 10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? IN — —

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

<u>% Difference</u>	<u>Qualifier</u>
25-50 %	J
50-90 % -	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. if using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

- 10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? — IXI —

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

- 11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? — IXI —

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

- 11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture? 1

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the Interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.

12.0 Chromatogram Quality

- 12.1 Were baselines stable? X

- 12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen? X

ACTION: Address comments under System Performance of data assessment.

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for
PEST/PCB analysis?

11

ACTION: Compare the reported results for
field duplicates and calculate the
relative percent difference.

ACTION: Any gross variation between field
duplicate results must be addressed
in the reviewer narrative. However, if
large differences exist, identification
of field duplicates should be confirmed
by contacting the sampler.



Ross Analytical Services, Inc.
16433 Foltz Industrial Parkway • Strongsville, Ohio 44136
(216) 572-3200 • Fax (216) 572-7620 • 1-800-325-7737

July 14, 1994

Richard Spear
USEPA Region II, ESD
Woodbridge Avenue
Building 209
Edison, NJ 08837

RECEIVED
JUL 18 1994

Contract No. 68-D2-0014, Bid Lot A
Narrative for Case 22276, SDG BPD08

Dear Richard:

This is the Narrative for the SDG referenced above. The SDG contained eleven (11) soil samples numbered BPD08-12, BPD25-26, BPD31-33, and BPG07. The samples were received on June 9, 1994.

The samples were analyzed for the full TCL.

VOA Fraction:

Samples BPD09 and BPD10 had problems with the surrogate recoveries. The re-analysis of these samples confirmed the matrix effect and will be included as billable samples on the invoice.

All samples were analyzed beyond the contract required holding times. We expect to be assessed liquidated damages for these samples.

BNA Fraction:

Samples BPD08, BPD10, BPD32, BPD33, and BPG07 had a high concentrations of target compounds which required the analysis of dilutions of the original extracts. These analyses will be included as billable analyses on the invoice.

Samples BPD12, BPD26, and BPD31 required medium level analyses which also would include medium level QC. The additional MS/MSD pair will be included as billable samples on the invoice.

Pesticide/PCB Fraction:

All samples had high concentrations of aroclor 1254 which required the analysis of dilutions of the original extracts. These analyses will be included on the invoice as billable analyses.

All the corrections to the raw data for all samples except BPD32 and BPD33 (which did not require corrections) were manually corrected by myself on July 14, 1994.

This data package will arrive beyond the contract required due date. We expect to be assessed liquidated damages for lateness for this SDG.

The Nelson Analytical Data System which we use cannot print the nanograms on column information for the pesticide/PCB fraction. This information is included after the Form X's and before the calibration raw data.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and the computer readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Respectively,

Dale L. Mori 7/14/94

Dale L. Mori
CLP Project Manager

Please send any CCS and other communications to me.

Thank you.

Dale L. Mori 7/14/94

Dale L. Mori
CLP Project Manager

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000014
EPA SAMPLE NO.

BPD27

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27
Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01A
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD27
Level: (low/med) LOW Date Received: 06/09/94
Moisture: not dec. _____ Date Analyzed: 06/17/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10 X	34
67-64-1	Acetone	10	34
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	0.8	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000015
EPA SAMPLE NO.

BPD27

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD27

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000139
EPA SAMPLE NO.

BPD27

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD27

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000140
EPA SAMPLE NO.

BPD27

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD27

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	UJ
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-Butylphthalate	0.2	J
206-44-0-----	Fluoranthene	0.2	J
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	UJ
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0-----	Di-n-Octyl Phthalate	10	UJ
205-99-2-----	Benzo(b)Fluoranthene	10	U
207-08-9-----	Benzo(k)Fluoranthene	10	U
50-32-8-----	Benzo(a)Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	10	UJ
53-70-3-----	Dibenz(a,h)Anthracene	10	U
191-24-2-----	Benzo(g,h,i)Perylene	10	U

000141

EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD27

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01BSample wt/vol: 1000 (g/mL) ML Lab File ID: BPD27Level: (low/med) LOW Date Received: 06/09/94% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94Injection Volume: 2.0 (uL) Dilution Factor: 1.0GPC Cleanup: (Y/N) N pH: 7.0Number TICs found: 3CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.03	4	BONA
2. 123-79-5	HEXANEDIOIC ACID, DIOCTYL ES	34.77	41	JN
3.	UNKNOWN	40.88	5	JR

Unknown Ester

000364

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD27

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-01

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0617B23

% Moisture: _____ decanted: (Y/N) _____ Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

319-84-6-----	alpha-BHC	.011	J
319-85-7-----	beta-BHC	.050	U
319-86-8-----	delta-BHC	.021	J-PJN
58-89-9-----	gamma-BHC [Lindane]	.050	U
76-44-8-----	Heptachlor	.050	U
309-00-2-----	Aldrin	.050	U
1024-57-3-----	Heptachlor Epoxide	.073	
959-98-8-----	Endosulfan I	.050	U
60-57-1-----	Dieldrin	.10	U
72-55-9-----	4,4'-DDE	.044	J-P
72-20-8-----	Endrin	.018	J-PK
33213-65-9-----	Endosulfan II	.10	U
72-54-8-----	4,4'-DDD	.10	U
1031-07-8-----	Endosulfan Sulfate	.10	U
50-29-3-----	4,4'-DDT	.10	U
72-43-5-----	Methoxychlor	.50	U
53494-70-5-----	Endrin Ketone	.10	U
7421-93-4-----	Endrin Aldehyde	.10	U
5103-71-9-----	alpha-Chlordane	.050	U
5103-74-2-----	gamma-Chlordane	.011	J-PJN
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	2.1	PS
11096-82-5-----	Aroclor-1260	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000023
EPA SAMPLE NO.

BPD28

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD28

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	3 J
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	10 U
67-64-1	Acetone	11 U
75-15-0	Carbon Disulfide	10 U
75-35-4	1,1-Dichloroethene	10 U
75-34-3	1,1-Dichloroethane	10 U
540-59-0	1,2-Dichloroethene (total)	17
67-66-3	Chloroform	10 U
107-06-2	1,2-Dichloroethane	10 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	10 U
56-23-5	Carbon Tetrachloride	10 U
75-27-4	Bromodichloromethane	10 U
78-87-5	1,2-Dichloropropane	10 U
10061-01-5	cis-1,3-Dichloropropene	10 U
79-01-6	Trichloroethene	10 U
124-48-1	Dibromochloromethane	10 U
79-00-5	1,1,2-Trichloroethane	10 U
71-43-2	Benzene	10 U
10061-02-6	trans-1,3-Dichloropropene	10 U
75-25-2	Bromoform	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	10 U
79-34-5	1,1,2,2-Tetrachloroethane	10 U
108-88-3	Toluene	10 U
108-90-7	Chlorobenzene	10 U
100-41-4	Ethylbenzene	10 U
100-42-5	Styrene	10 U
1330-20-7	Xylene (total)	10 U

000024

EPA SAMPLE NO.

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD28

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-02ASample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD28Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. _____ Date Analyzed: 06/17/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

000154

EPA SAMPLE NO.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BPD28

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-02BSample wt/vol: 1000 (g/mL) ML Lab File ID: BPD28Level: (low/med) LOW Date Received: 06/09/94% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94Injection Volume: 2.0 (uL) Dilution Factor: 1.0GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) Ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) Methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-Methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

000155

EPA SAMPLE NO.

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BPD28

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD28

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

51-28-5-----2,4-Dinitrophenol	25	U
100-02-7-----4-Nitrophenol	25	U J
132-64-9-----Dibenzofuran	10	U
121-14-2-----2,4-Dinitrotoluene	10	U
84-66-2-----Diethylphthalate	10 0.6	U
7005-72-3-----4-Chlorophenyl-phenylether	10	U
86-73-7-----Fluorene	10	U
100-01-6-----4-Nitroaniline	25	U
534-52-1-----4,6-Dinitro-2-methylphenol	25	U
86-30-6-----N-Nitrosodiphenylamine (1)	10	U
101-55-3-----4-Bromophenyl-phenylether	10	U
118-74-1-----Hexachlorobenzene	10	U
87-86-5-----Pentachlorophenol	25	U
85-01-8-----Phenanthrene	0.4	J
120-12-7-----Anthracene	10	U
86-74-8-----Carbazole	10	U
84-74-2-----Di-n-Butylphthalate	10	U
206-44-0-----Fluoranthene	0.6	J
129-00-0-----Pyrene	0.7	J
85-68-7-----Butylbenzylphthalate	3	J
91-94-1-----3,3'-Dichlorobenzidine	10	U
56-55-3-----Benzo (a) Anthracene	10	U
218-01-9-----Chrysene	10	U
117-81-7-----bis (2-Ethylhexyl) Phthalate	15	U
117-84-0-----Di-n-Octyl Phthalate	10	U J
205-99-2-----Benzo (b) Fluoranthene	10	U
207-08-9-----Benzo (k) Fluoranthene	10	U
50-32-8-----Benzo (a) Pyrene	10	U
193-39-5-----Indeno (1,2,3-cd) Pyrene	10	U J
53-70-3-----Dibenz (a,h) Anthracene	10	U
191-24-2-----Benzo (g,h,i) Perylene	10	U

000156

EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD28

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-02BSample wt/vol: 1000 (g/mL) ML Lab File ID: BPD28Level: (low/med) LOW Date Received: 06/09/94% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94Injection Volume: 2.0 (uL) Dilution Factor: 1.0GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 14

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.05	4	BJNA R
2. 4337-65-9	HEXANEDIOIC-ACID, MONO-(2-ETH	34.78	22	BJW K
3.	UNKNOWN	34.93	1	J
4.	UNKNOWN	35.07	0.3	J
5.	UNKNOWN	35.27	1	J
6.	UNKNOWN	35.40	4	J
7. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	35.47	7	JN
8.	UNKNOWN	35.53	6	J
9.	UNKNOWN	35.60	6	J
10.	UNKNOWN	35.68	6	J
11.	UNKNOWN	35.83	1	J
12.	UNKNOWN	35.92	1	J
13.	UNKNOWN	35.98	1	J
14.	UNKNOWN	36.13	2	JV

Unknown E. for

000375

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD28

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER

Lab Sample ID: 94-06-123-02

Sample wt/vol: 1000.0 (g/mL) ML

Lab File ID: G0617B26

% Moisture: _____ decanted: (Y/N) _____

Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT

Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL)

Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

319-84-6-----	alpha-BHC	.024	JPR
319-85-7-----	beta-BHC	.050	U
319-86-8-----	delta-BHC	.021	JPR
58-89-9-----	gamma-BHC [Lindane]	.050	U
76-44-8-----	Heptachlor	.050	U
309-00-2-----	Aldrin	.050	U
1024-57-3-----	Heptachlor Epoxide	.10	R P
959-98-8-----	Endosulfan I	.050	U
60-57-1-----	Dieldrin	.018	JPR R
72-55-9-----	4,4'-DDE	.022	JPR JN
72-20-8-----	Endrin	.10	U
33213-65-9-----	Endosulfan II	.10	U
72-54-8-----	4,4'-DDD	.10	U
1031-07-8-----	Endosulfan Sulfate	.10	U
50-29-3-----	4,4'-DDT	.021	JPR JN
72-43-5-----	Methoxychlor	.065	JPR
53494-70-5-----	Endrin Ketone	.10	U
7421-93-4-----	Endrin Aldehyde	.10	U
5103-71-9-----	alpha-Chlordane	.035	J
5103-74-2-----	gamma-Chlordane	.040	JPR
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.9	JPR
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000031
EPA SAMPLE NO.

BPD29

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27
Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-03A
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD29
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. _____ Date Analyzed: 06/17/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	10 2	J
67-64-1	-----Acetone	10 8	J
75-15-0	-----Carbon Disulfide	10	U
75-35-4	-----1,1-Dichloroethene	10	U
75-34-3	-----1,1-Dichloroethane	10	U
540-59-0	-----1,2-Dichloroethene (total)	5	J
67-66-3	-----Chloroform	10	U
107-06-2	-----1,2-Dichloroethane	10	U
78-93-3	-----2-Butanone	3	J
71-55-6	-----1,1,1-Trichloroethane	10	U
56-23-5	-----Carbon Tetrachloride	10	U
75-27-4	-----Bromodichloromethane	10	U
78-87-5	-----1,2-Dichloropropane	10	U
10061-01-5	-----cis-1,3-Dichloropropene	10	U
79-01-6	-----Trichloroethene	10	U
124-48-1	-----Dibromochloromethane	10	U
79-00-5	-----1,1,2-Trichloroethane	10	U
71-43-2	-----Benzene	10	U
10061-02-6	-----trans-1,3-Dichloropropene	10	U
75-25-2	-----Bromoform	10	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	10	U
79-34-5	-----1,1,2,2-Tetrachloroethane	10	U
108-88-3	-----Toluene	10	U
108-90-7	-----Chlorobenzene	0.2	J
100-41-4	-----Ethylbenzene	10	U
100-42-5	-----Styrene	10	U
1330-20-7	-----Xylene (total)	10	U

000032

EPA SAMPLE NO.

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD29

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-03ASample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD29Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. _____ Date Analyzed: 06/17/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

000183

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD29

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD29

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/L

Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) Ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) Methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-Methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

000184

EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BPD29

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD29

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: decanted: (Y/N) Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	UJ
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10 0.4	BD
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	UJ
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	10 X	BD
117-84-0-----	Di-n-Octyl Phthalate	10	UJ
205-99-2-----	Benzo(b) Fluoranthene	10	U
207-08-9-----	Benzo(k) Fluoranthene	10	U
50-32-8-----	Benzo(a) Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	10	UJ
53-70-3-----	Dibenz(a,h) Anthracene	10	U
191-24-2-----	Benzo(g,h,i) Perylene	10	U

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000185
EPA SAMPLE NO.

BPD29

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD29

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 3

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.03	4	BJNA
2. 108-85-0	CYCLOHEXANE, BROMO-	16.30	4	JN
3. 123-79-5	HEXANEDIOIC ACID, DIOCTYL-ES	34.75	10	JN

000386

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD29

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER

Lab Sample ID: 94-06-123-03

Sample wt/vol: 1000.0 (g/mL) ML

Lab File ID: G0617B27

% Moisture: _____ decanted: (Y/N) _____

Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT

Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL)

Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	.050	U
319-85-7-----	beta-BHC	.050	U
319-86-8-----	delta-BHC	.028	J P
58-89-9-----	gamma-BHC [Lindane]	.050	U
76-44-8-----	Heptachlor	.050	U
309-00-2-----	Aldrin	.050	U
1024-57-3-----	Heptachlor Epoxide	.017	J P J N
959-98-8-----	Endosulfan I	.050	U
60-57-1-----	Dieldrin	.10	U
72-55-9-----	4,4'-DDE	.10	U
72-20-8-----	Endrin	.10	U
33213-65-9-----	Endosulfan II	.10	U
72-54-8-----	4,4'-DDD	.10	U
1031-07-8-----	Endosulfan Sulfate	.10	U
50-29-3-----	4,4'-DDT	.10	U
72-43-5-----	Methoxychlor	.50	U
53494-70-5-----	Endrin Ketone	.10	U
7421-93-4-----	Endrin Aldehyde	.10	U
5103-71-9-----	alpha-Chlordane	.050	U
5103-74-2-----	gamma-Chlordane	.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000041
EPA SAMPLE NO.

BPD30

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD30

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10 0.7	J U
67-64-1	Acetone	10 7	J U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	5	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	0.5	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	0.2	J
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

000042

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BPD30

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-04ASample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD30Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. _____ Date Analyzed: 06/17/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/LNumber TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000196
EPA SAMPLE NO.

BPD30

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD30

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

108-95-2-----Phenol	10	U
111-44-4-----bis(2-Chloroethyl) Ether	10	U
95-57-8-----2-Chlorophenol	10	U
541-73-1-----1,3-Dichlorobenzene	10	U
106-46-7-----1,4-Dichlorobenzene	10	U
95-50-1-----1,2-Dichlorobenzene	10	U
95-48-7-----2-Methylphenol	10	U
108-60-1-----2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----4-Methylphenol	10	U
621-64-7-----N-Nitroso-Di-n-Propylamine	10	U
67-72-1-----Hexachloroethane	10	U
98-95-3-----Nitrobenzene	10	U
78-59-1-----Isophorone	10	U
88-75-5-----2-Nitrophenol	10	U
105-67-9-----2,4-Dimethylphenol	10	U
111-91-1-----bis(2-Chloroethoxy) Methane	10	U
120-83-2-----2,4-Dichlorophenol	10	U
120-82-1-----1,2,4-Trichlorobenzene	10	U
91-20-3-----Naphthalene	10	U
106-47-8-----4-Chloroaniline	10	U
87-68-3-----Hexachlorobutadiene	10	U
59-50-7-----4-Chloro-3-Methylphenol	10	U
91-57-6-----2-Methylnaphthalene	10	U
77-47-4-----Hexachlorocyclopentadiene	10	U
88-06-2-----2,4,6-Trichlorophenol	10	U
95-95-4-----2,4,5-Trichlorophenol	25	U
91-58-7-----2-Chloronaphthalene	10	U
88-74-4-----2-Nitroaniline	25	U
131-11-3-----Dimethylphthalate	10	U
208-96-8-----Acenaphthylene	10	U
606-20-2-----2,6-Dinitrotoluene	10	U
99-09-2-----3-Nitroaniline	25	U
83-32-9-----Acenaphthene	10	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000197
EPA SAMPLE NO.

BPD30

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD30

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10 0.5	B U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo (a) Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis (2-Ethylhexyl) Phthalate	10 0.6	B U
117-84-0-----	Di-n-Octyl Phthalate	10	U
205-99-2-----	Benzo (b) Fluoranthene	10	U
207-08-9-----	Benzo (k) Fluoranthene	10	U
50-32-8-----	Benzo (a) Pyrene	10	U
193-39-5-----	Indeno (1,2,3-cd) Pyrene	10	U
53-70-3-----	Dibenz (a,h) Anthracene	10	U
191-24-2-----	Benzo (g,h,i) Perylene	10	U

000198

EPA SAMPLE NO.

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD30

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD30

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 3

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.03	5	BONA-1K
2. 108-85-0	CYCLOHEXANE, BROMO-	16.32	4	JN
3. 4337-65-9	HEXANEDIOIC-ACID, MONO-(2-ETH	34.77	16	BON<

Handwritten: 10/10/94

000391

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD30

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER

Lab Sample ID: 94-06-123-04

Sample wt/vol: 1000.0 (g/mL) ML

Lab File ID: G0617B28

% Moisture: _____ decanted: (Y/N) _____

Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT

Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL)

Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	.050	U
319-85-7-----	beta-BHC	.050	U
319-86-8-----	delta-BHC	.028	J
58-89-9-----	gamma-BHC [Lindane]	.050	U
76-44-8-----	Heptachlor	.050	U
309-00-2-----	Aldrin	0.050 -0096	J-P
1024-57-3-----	Heptachlor Epoxide	.020	J-P
959-98-8-----	Endosulfan I	.050	U
60-57-1-----	Dieldrin	.10	U
72-55-9-----	4,4'-DDE	.10	U
72-20-8-----	Endrin	.10	U
33213-65-9-----	Endosulfan II	.10	U
72-54-8-----	4,4'-DDD	.10	U
1031-07-8-----	Endosulfan Sulfate	.10	U
50-29-3-----	4,4'-DDT	.10	U
72-43-5-----	Methoxychlor	.50	U
53494-70-5-----	Endrin Ketone	.10	U
7421-93-4-----	Endrin Aldehyde	.10	U
5103-71-9-----	alpha-Chlordane	.050	U
5103-74-2-----	gamma-Chlordane	.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000051
EPA SAMPLE NO.

BPD34

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27
Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-05A
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD34
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. _____ Date Analyzed: 06/17/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	0.6	J
67-64-1-----	Acetone	7	J
75-15-0-----	Carbon Disulfide	0.5	J
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (total)	10	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000052
EPA SAMPLE NO.

BPD34

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPD34

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000209
EPA SAMPLE NO.

BPD34

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD34

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000210
EPA SAMPLE NO.

BPD34

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD34

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	0.5	BJ
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl) Phthalate	1	BJ
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b) Fluoranthene	10	U
207-08-9	Benzo(k) Fluoranthene	10	U
50-32-8	Benzo(a) Pyrene	10	U
193-39-5	Indeno(1,2,3-cd) Pyrene	10	U
53-70-3	Dibenz(a,h) Anthracene	10	U
191-24-2	Benzo(g,h,i) Perylene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000211
EPA SAMPLE NO.

BPD34

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27
Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-05B
Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD34
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.03	4	BJNA
2.	UNKNOWN	9.52	2	J
3.	UNKNOWN	11.78	4	J
4. 108-85-0	CYCLOHEXANE, BROMO-	16.32	8	JN
5. 4337-65-9	HEXANEDIOIC-ACID, MONO-(2-ETH-	34.77	11	BJN
6.	UNKNOWN	40.88	0.9	J

UNKNOWN

000397

EPA SAMPLE NO.

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

BPD34

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER

Lab Sample ID: 94-06-123-05

Sample wt/vol: 1000.0 (g/mL) ML

Lab File ID: G0617B29

% Moisture: _____ decanted: (Y/N) _____

Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT

Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL)

Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----alpha-BHC	.050	U
319-85-7-----beta-BHC	.050	U
319-86-8-----delta-BHC	.050	U
58-89-9-----gamma-BHC [Lindane]	.050	U
76-44-8-----Heptachlor	.050	U
309-00-2-----Aldrin	.050	U
1024-57-3-----Heptachlor Epoxide	.050	U
959-98-8-----Endosulfan I	.050	U
60-57-1-----Dieldrin	.10	U
72-55-9-----4,4'-DDE	.10	U
72-20-8-----Endrin	.10	U
33213-65-9-----Endosulfan II	.10	U
72-54-8-----4,4'-DDD	.10	U
1031-07-8-----Endosulfan Sulfate	.10	U
50-29-3-----4,4'-DDT	.10	U
72-43-5-----Methoxychlor	.50	U
53494-70-5-----Endrin Ketone	.10	U
7421-93-4-----Endrin Aldehyde	.10	U
5103-71-9-----alpha-Chlordane	.050	U
5103-74-2-----gamma-Chlordane	.050	U
8001-35-2-----Toxaphene	5.0	U
12674-11-2-----Aroclor-1016	1.0	U
11104-28-2-----Aroclor-1221	2.0	U
11141-16-5-----Aroclor-1232	1.0	U
53469-21-9-----Aroclor-1242	1.0	U
12672-29-6-----Aroclor-1248	1.0	U
11097-69-1-----Aroclor-1254	1.0	U
11096-82-5-----Aroclor-1260	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000059
EPA SAMPLE NO.

BPD83

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27
Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-06A
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPB83
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. _____ Date Analyzed: 06/17/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	1	J
67-64-1-----	Acetone	10	
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (total)	10	U

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IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000060
EPA SAMPLE NO.

BPD83

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPB83

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000225
EPA SAMPLE NO.

BPD83

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD83

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
108-95-2	Phenol	2	J
111-44-4	bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000226
EPA SAMPLE NO.

BPD83

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD83

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	UJ
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	0.5	BJ
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	UJ
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	0.6	BJ
117-84-0-----	Di-n-Octyl Phthalate	10	UJ
205-99-2-----	Benzo(b) Fluoranthene	10	U
207-08-9-----	Benzo(k) Fluoranthene	10	U
50-32-8-----	Benzo(a) Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	10	UJ
53-70-3-----	Dibenz(a,h) Anthracene	10	U
191-24-2-----	Benzo(g,h,i) Perylene	10	U

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000227
EPA SAMPLE NO.

BPD83

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPD83

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	9.03	4	BJNA
2.	UNKNOWN	9.53	4	J
3.	UNKNOWN	11.78	4	J
4. 108-85-0	CYCLOHEXANE, BROMO-	16.32	9	JN
5. 4337-65-9	HEXANEDIOIC ACID, MONO(2-ETH	34.77	10	BJN

Unknown Ester

000402

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD83

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER

Lab Sample ID: 94-06-123-06

Sample wt/vol: 1000.0 (g/mL) ML

Lab File ID: G0617B30

% Moisture: _____ decanted: (Y/N) _____

Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT

Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL)

Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	.050	U
319-85-7-----	beta-BHC	.050	U
319-86-8-----	delta-BHC	.050	U
58-89-9-----	gamma-BHC [Lindane]	.050	U
76-44-8-----	Heptachlor	.050	U
309-00-2-----	Aldrin	.050	U
1024-57-3-----	Heptachlor Epoxide	.050	U
959-98-8-----	Endosulfan I	.050	U
60-57-1-----	Dieldrin	.10	U
72-55-9-----	4,4'-DDE	.10	U
72-20-8-----	Endrin	.10	U
33213-65-9-----	Endosulfan II	.10	U
72-54-8-----	4,4'-DDD	.10	U
1031-07-8-----	Endosulfan Sulfate	.10	U
50-29-3-----	4,4'-DDT	.10	U
72-43-5-----	Methoxychlor	.50	U
53494-70-5-----	Endrin Ketone	.10	U
7421-93-4-----	Endrin Aldehyde	.10	U
5103-71-9-----	alpha-Chlordane	.050	U
5103-74-2-----	gamma-Chlordane	.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

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000072

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPG00

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPG00

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/L

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	100	
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	2	J
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (total)	10	U

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IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000073
EPA SAMPLE NO.

BPG00

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPG00

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

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IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000241
EPA SAMPLE NO.

BPG00

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPG00

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	UJ
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	UJ
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000242
EPA SAMPLE NO.

BPG00

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPG00

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	1	J
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	2	J
129-00-0-----	Pyrene	2	J
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)Anthracene	1	J
218-01-9-----	Chrysene	2	J
117-81-7-----	bis(2-Ethylhexyl) Phthalate	10	U
117-84-0-----	Di-n-Octyl Phthalate	2	J
205-99-2-----	Benzo(b) Fluoranthene	0.6	J
207-08-9-----	Benzo(k) Fluoranthene	10	U
50-32-8-----	Benzo(a) Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	10	U
53-70-3-----	Dibenz(a,h) Anthracene	10	U
191-24-2-----	Benzo(g,h,i) Perylene	10	U

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IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000243
EPA SAMPLE NO.

BPG00

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BPG00

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 06/13/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	8.98	5	BONA
2.	UNKNOWN- <i>lab wa. Ester</i>	34.67	1	<i>JR</i>

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

000407
EPA SAMPLE NO.

BPG00

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-08

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0617B31

% Moisture: _____ decanted: (Y/N) _____ Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 06/13/94

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 06/18/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----alpha-BHC	.054	P	7/1
319-85-7-----beta-BHC	.050	U	
319-86-8-----delta-BHC	.050	U	
58-89-9-----gamma-BHC [Lindane]	.050	U	
76-44-8-----Heptachlor	.050	U	
309-00-2-----Aldrin	.050	U	
1024-57-3-----Heptachlor Epoxide	.80	P	5/1
959-98-8-----Endosulfan I	.26	P	J
60-57-1-----Dieldrin	.27	P	4
72-55-9-----4,4'-DDE	.26	P	4
72-20-8-----Endrin	.12		
33213-65-9-----Endosulfan II	.10	U	
72-54-8-----4,4'-DDD	.10	U	
1031-07-8-----Endosulfan Sulfate	.10	U	
50-29-3-----4,4'-DDT	.10	U	
72-43-5-----Methoxychlor	.030	J-P	4
53494-70-5-----Endrin Ketone	.10	U	
7421-93-4-----Endrin Aldehyde	.10	U	
5103-71-9-----alpha-Chlordane	.041	J-P	4
5103-74-2-----gamma-Chlordane	.089	P	4
8001-35-2-----Toxaphene	5.0	U	
12674-11-2-----Aroclor-1016	1.0	U	
11104-28-2-----Aroclor-1221	2.0	U	
11141-16-5-----Aroclor-1232	1.0	U	
53469-21-9-----Aroclor-1242	1.0	U	
12672-29-6-----Aroclor-1248	24.		
11097-69-1-----Aroclor-1254	20.	P	5/1
11096-82-5-----Aroclor-1260	1.0	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000017
EPA SAMPLE NO.

BPD08

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD08

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 10 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	UJ
75-01-4-----	Vinyl Chloride	11	UJ
75-00-3-----	Chloroethane	11	UJ
75-09-2-----	Methylene Chloride	11.9	BJ 1J
67-64-1-----	Acetone	11.4	BJ 1J
75-15-0-----	Carbon Disulfide	11.0.6	8 1J
75-35-4-----	1,1-Dichloroethene	11	UJ
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	UV
79-01-6-----	Trichloroethene	5	J
124-48-1-----	Dibromochloromethane	11	UJ
79-00-5-----	1,1,2-Trichloroethane	11	UJ
71-43-2-----	Benzene	0.5	J
10061-02-6-----	trans-1,3-Dichloropropene	11	UJ
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	UV
127-18-4-----	Tetrachloroethene	0.6	J
79-34-5-----	1,1,2,2-Tetrachloroethane	11	UJ
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (total)	11	UV

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000015
EPA SAMPLE NO.

BPD08

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD08

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 10 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8 124-33-7	MBTHANE, TETRANITRO- <i>Carb. D. 0.01 K</i>	3.40	96	IN <i>12</i>

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000285
EPA SAMPLE NO.

BPD08

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD08

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) Ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	(370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) Methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	110	J
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-Methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	97	J
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	210	J

131

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000286
EPA SAMPLE NO.

BPD08

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD08

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	140	J
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	150	J
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	2200	
120-12-7	Anthracene	380	
86-74-8	Carbazole	220	J
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	3600	E
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	1700	
218-01-9	Chrysene	2000	
117-81-7	bis(2-Ethylhexyl) Phthalate	48	J
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b) Fluoranthene	2400	
207-08-9	Benzo(k) Fluoranthene	1300	
50-32-8	Benzo(a) Pyrene	1900	
193-39-5	Indeno(1,2,3-cd) Pyrene	1400	
53-70-3	Dibenz(a,h)Anthracene	460	
191-24-2	Benzo(g,h,i) Perylene	1100	

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000287
EPA SAMPLE NO.

BPD08

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD08

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 10 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 20 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-92-2	1 -BUTANOL, 3-METHYL-, -ACETAT	6.03	34000	BJN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.48	35000	BJNAK
3. 4305-26-4	2-HEXANONE, 6 -(ACETYLOXY)-	9.32	2700	JN
4. 55720-37-1	NAPHTHALENE, 1,3,7-TRICHLORO	25.12	1400	JN
5.	UNKNOWN	28.90	1100	J
6. 32598-13-3	1,1'-BIPHENYL, 3,3',4,4'-TET	29.60	1300	JN
7.	UNKNOWN	30.15	910	JH
8. 68194-06-9	1,1'-BIPHENYL, 2,2',4,5,6'-P	30.30	3900	JN
9. 38380-01-7	1,1'-BIPHENYL, 2,2',4,4',5-P	30.87	1200	JN
10. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	31.00	1700	JN
11. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.25	4400	JN
12.	UNKNOWN	31.55	1100	JH
13. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.92	5500	JN
14. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	32.45	2200	JN
15. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	32.58	2800	JN
16. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	33.15	4000	JN
17.	UNKNOWN	33.22	590	JH
18.	UNKNOWN	33.68	530	J
19. 56030-56-9	1,1'-BIPHENYL, 2,2',3,4,4',6	33.83	1600	JN
20. 205-99-2	BENZ[E]ACEPHENANTHRYLENE	39.47	2200	JN

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001150

BPD08

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-01

Sample wt/vol: 29.7 (g/mL) G Lab File ID: J0629B05

% Moisture: 10. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	19.	U
319-85-7-----	beta-BHC	19.	U
319-86-8-----	delta-BHC	19.	U
58-89-9-----	gamma-BHC [Lindane]	19.	U
76-44-8-----	Heptachlor	19.	U
309-00-2-----	Aldrin	19.	U
1024-57-3-----	Heptachlor Epoxide	19.	U
959-98-8-----	Endosulfan I	19.	U
60-57-1-----	Dieldrin	37.	U
72-55-9-----	4,4'-DDE	37.	U
72-20-8-----	Endrin	37.	U
33213-65-9-----	Endosulfan II	37.	U
72-54-8-----	4,4'-DDD	37.	U
1031-07-8-----	Endosulfan Sulfate	37.	U
50-29-3-----	4,4'-DDT	37.	U
72-43-5-----	Methoxychlor	190.	U
53494-70-5-----	Endrin Ketone	37.	U
7421-93-4-----	Endrin Aldehyde	37.	U
5103-71-9-----	alpha-Chlordane	19.	U
5103-74-2-----	gamma-Chlordane	19.	U
8001-35-2-----	Toxaphene	1900.	U
12674-11-2-----	Aroclor-1016	370.	U
11104-28-2-----	Aroclor-1221	750.	U
11141-16-5-----	Aroclor-1232	370.	U
53469-21-9-----	Aroclor-1242	370.	U
12672-29-6-----	Aroclor-1248	370.	U
11097-69-1-----	Aroclor-1254	6300 69000	X
11096-82-5-----	Aroclor-1260	370.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000029
EPA SAMPLE NO.

BPD09

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD09

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 25 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	13	UJ
74-83-9	Bromomethane	13	UJ
75-01-4	Vinyl Chloride	13	UJ
75-00-3	Chloroethane	13	UJ
75-09-2	Methylene Chloride	13 9	UJ UJ
67-64-1	Acetone	13 7	UJ UJ
75-15-0	Carbon Disulfide	13	UJ
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	19	
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	82	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	UV

11: 71 - 124.1

000030
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD09

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02A
Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD09
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 25 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8 124-35-9	METHANE, TETRANITRO- <i>Carbon Dioxide</i>	3.33	890	<i>AN R</i>

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000385
EPA SAMPLE NO.

BPD09

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02B

Sample wt/vol: 29.6 (g/mL) G Lab File ID: BPD09

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 25 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----Phenol	450	U
111-44-4-----bis(2-Chloroethyl) Ether	450	U
95-57-8-----2-Chlorophenol	450	U
541-73-1-----1,3-Dichlorobenzene	450	U
106-46-7-----1,4-Dichlorobenzene	450	U
95-50-1-----1,2-Dichlorobenzene	450	U
95-48-7-----2-Methylphenol	450	U
108-60-1-----2,2'-oxybis(1-Chloropropane)	450	U
106-44-5-----4-Methylphenol	450	U
621-64-7-----N-Nitroso-Di-n-Propylamine	450	U
67-72-1-----Hexachloroethane	450	U
98-95-3-----Nitrobenzene	450	U
78-59-1-----Isophorone	450	U
88-75-5-----2-Nitrophenol	450	U
105-67-9-----2,4-Dimethylphenol	450	U
111-91-1-----bis(2-Chloroethoxy)Methane	450	U
120-83-2-----2,4-Dichlorophenol	450	U
120-82-1-----1,2,4-Trichlorobenzene	450	U
91-20-3-----Naphthalene	180	J
106-47-8-----4-Chloroaniline	450	U
87-68-3-----Hexachlorobutadiene	450	U
59-50-7-----4-Chloro-3-Methylphenol	450	U
91-57-6-----2-Methylnaphthalene	350	J
77-47-4-----Hexachlorocyclopentadiene	450	U
88-06-2-----2,4,6-Trichlorophenol	450	U
95-95-4-----2,4,5-Trichlorophenol	1100	U
91-58-7-----2-Chloronaphthalene	450	U
88-74-4-----2-Nitroaniline	1100	U
131-11-3-----Dimethylphthalate	450	U
208-96-8-----Acenaphthylene	24	J
606-20-2-----2,6-Dinitrotoluene	450	U
99-09-2-----3-Nitroaniline	1100	U
83-32-9-----Acenaphthene	60	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000386
EPA SAMPLE NO.

BPD09

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02B

Sample wt/vol: 29.6 (g/mL) G Lab File ID: BPD09

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 25 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
51-28-5-----	2,4-Dinitrophenol	1100	U
100-02-7-----	4-Nitrophenol	1100	U
132-64-9-----	Dibenzofuran	130	J
121-14-2-----	2,4-Dinitrotoluene	450	U
84-66-2-----	Diethylphthalate	450	U
7005-72-3-----	4-Chlorophenyl-phenylether	450	U
86-73-7-----	Fluorene	56	J
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-Nitrosodiphenylamine (1)	450	U
101-55-3-----	4-Bromophenyl-phenylether	450	U
118-74-1-----	Hexachlorobenzene	450	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	960	
120-12-7-----	Anthracene	95	J
86-74-8-----	Carbazole	110	J
84-74-2-----	Di-n-Butylphthalate	450	U
206-44-0-----	Fluoranthene	1500	
129-00-0-----	Pyrene	1100	
85-68-7-----	Butylbenzylphthalate	240	J
91-94-1-----	3,3'-Dichlorobenzidine	450	U
56-55-3-----	Benzo(a)Anthracene	670	
218-01-9-----	Chrysene	1100	
117-81-7-----	bis(2-Ethylhexyl) Phthalate	1200	
117-84-0-----	Di-n-Octyl Phthalate	450	U
205-99-2-----	Benzo(b) Fluoranthene	970	
207-08-9-----	Benzo(k) Fluoranthene	760	
50-32-8-----	Benzo(a) Pyrene	790	
193-39-5-----	Indeno(1,2,3-cd) Pyrene	530	
53-70-3-----	Dibenz(a,h)Anthracene	450	U
191-24-2-----	Benzo(g,h,i) Perylene	480	

000387

EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD09

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02B

Sample wt/vol: 29.6 (g/mL) G Lab File ID: BPD09

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 25 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC ACID, PENTYL ESTER	6.07	41000	JN/K
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.52	43000	BJNA/R
3. 4305-26-4	2-HEXANONE, 6-(ACETYLOXY)-	9.35	3400	JN
4. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.60	1500	JN
5. 52663-59-9	1,1'-BIPHENYL, 2,2',3,4-TETR	29.63	3400	JN
6.	UNKNOWN	30.18	1400	JN
7. 68194-06-9	1,1'-BIPHENYL, 2,2',4,5,6'-P	30.35	6300	JN
8. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.90	2700	JN
9. 38380-02-8	1,1'-BIPHENYL, 2,2',3,4,5'-P	31.03	3200	JN
10. 38380-01-7	1,1'-BIPHENYL, 2,2',4,4',5-P	31.15	900	JN
11. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.30	6600	JN
12.	UNKNOWN	31.58	1800	JN
13. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.95	8100	JN
14. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	32.48	3500	JN
15. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	32.62	4200	JN
16. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	33.18	5900	JN
17. 56030-56-9	1,1'-BIPHENYL, 2,2',3,4,4',6	33.87	1800	JN
18. 629-99-2	PENTACOSANE	36.37	2100	JN
19. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	39.20	8200	JN
20. 630-02-4	OCTACOSANE	43.28	5100	JN
21.	UNKNOWN	48.60	8900	JN

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001172

BPD09

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-02

Sample wt/vol: 30.2 (g/mL) G Lab File ID: J0629B06

% Moisture: 25. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 4.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	23.	U
319-85-7-----	beta-BHC	23.	U
319-86-8-----	delta-BHC	23.	U
58-89-9-----	gamma-BHC [Lindane]	23.	U
76-44-8-----	Heptachlor	23.	U
309-00-2-----	Aldrin	23.	U
1024-57-3-----	Heptachlor Epoxide	23.	U
959-98-8-----	Endosulfan I	23.	U
60-57-1-----	Dieldrin	44.	U
72-55-9-----	4,4'-DDE	44.	U
72-20-8-----	Endrin	44.	U
33213-65-9-----	Endosulfan II	44.	U
72-54-8-----	4,4'-DDD	44.	U
1031-07-8-----	Endosulfan Sulfate	44.	U
50-29-3-----	4,4'-DDT	44.	U
72-43-5-----	Methoxychlor	230.	U
53494-70-5-----	Endrin Ketone	44.	U
7421-93-4-----	Endrin Aldehyde	44.	U
5103-71-9-----	alpha-Chlordane	23.	U
5103-74-2-----	gamma-Chlordane	23.	U
8001-35-2-----	Toxaphene	2300.	U
12674-11-2-----	Aroclor-1016	440.	U
11104-28-2-----	Aroclor-1221	890.	U
11141-16-5-----	Aroclor-1232	440.	U
53469-21-9-----	Aroclor-1242	440.	U
12672-29-6-----	Aroclor-1248	440.	U
11097-69-1-----	Aroclor-1254	440.	U
11096-82-5-----	Aroclor-1260	440.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000053
EPA SAMPLE NO.

BPD10

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD10

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 15 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	-----Chloromethane	12	UJ
74-83-9	-----Bromomethane	12	UJ
75-01-4	-----Vinyl Chloride	12	UI
75-00-3	-----Chloroethane	12	UJ
75-09-2	-----Methylene Chloride	21	BHJ
67-64-1	-----Acetone	12	BHJ
75-15-0	-----Carbon Disulfide	12	BHJ
75-35-4	-----1,1-Dichloroethene	12	UJ
75-34-3	-----1,1-Dichloroethane	12	U
540-59-0	-----1,2-Dichloroethene (total)	12	U
67-66-3	-----Chloroform	12	U
107-06-2	-----1,2-Dichloroethane	12	U
78-93-3	-----2-Butanone	12	U
71-55-6	-----1,1,1-Trichloroethane	12	U
56-23-5	-----Carbon Tetrachloride	12	U
75-27-4	-----Bromodichloromethane	12	U
78-87-5	-----1,2-Dichloropropane	12	U
10061-01-5	-----cis-1,3-Dichloropropene	12	U
79-01-6	-----Trichloroethene	0.9	J
124-48-1	-----Dibromochloromethane	12	UJ
79-00-5	-----1,1,2-Trichloroethane	12	U
71-43-2	-----Benzene	12	U
10061-02-6	-----trans-1,3-Dichloropropene	12	U
75-25-2	-----Bromoform	12	U
108-10-1	-----4-Methyl-2-Pentanone	12	U
591-78-6	-----2-Hexanone	12	U
127-18-4	-----Tetrachloroethene	12	U
79-34-5	-----1,1,2,2-Tetrachloroethane	12	U
108-88-3	-----Toluene	12	U
108-90-7	-----Chlorobenzene	12	U
100-41-4	-----Ethylbenzene	12	U
100-42-5	-----Styrene	12	U
1330-20-7	-----Xylene (total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000054
EPA SAMPLE NO.

BPD10

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD10

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 15 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 124-38-9	CARBON DIOXIDE	3.37	270	B-JN R
2. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.37	13	JN

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000116
EPA SAMPLE NO.

BPD10

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD10

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 15 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	390	U
111-44-4-----	bis(2-Chloroethyl) Ether	390	U
95-57-8-----	2-Chlorophenol	390	U
541-73-1-----	1,3-Dichlorobenzene	390	U
106-46-7-----	1,4-Dichlorobenzene	390	U
95-50-1-----	1,2-Dichlorobenzene	390	U
95-48-7-----	2-Methylphenol	390	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	390	UJ
106-44-5-----	4-Methylphenol	390	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	390	U
67-72-1-----	Hexachloroethane	390	U
98-95-3-----	Nitrobenzene	390	U
78-59-1-----	Isophorone	390	U
88-75-5-----	2-Nitrophenol	390	U
105-67-9-----	2,4-Dimethylphenol	390	U
111-91-1-----	bis(2-Chloroethoxy) Methane	390	U
120-83-2-----	2,4-Dichlorophenol	390	U
120-82-1-----	1,2,4-Trichlorobenzene	390	U
91-20-3-----	Naphthalene	170	J
106-47-8-----	4-Chloroaniline	390	U
87-68-3-----	Hexachlorobutadiene	390	U
59-50-7-----	4-Chloro-3-Methylphenol	390	U
91-57-6-----	2-Methylnaphthalene	330	J
77-47-4-----	Hexachlorocyclopentadiene	390	U
88-06-2-----	2,4,6-Trichlorophenol	390	U
95-95-4-----	2,4,5-Trichlorophenol	950	U
91-58-7-----	2-Chloronaphthalene	390	U
88-74-4-----	2-Nitroaniline	950	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	300	J
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	950	U
83-32-9-----	Acenaphthene	74	J

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000437
EPA SAMPLE NO.

BPDIO

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPDIO

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 15 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	950	U
100-02-7	4-Nitrophenol	950	U
132-64-9	Dibenzofuran	140	J
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	53	J
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	990	
120-12-7	Anthracene	240	J
86-74-8	Carbazole	140	J
84-74-2	Di-n-Butylphthalate	52	J
206-44-0	Fluoranthene	5000-4200	E
129-00-0	Pyrene	2900	
55-68-7	Butylbenzylphthalate	20	J
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	1800	
218-01-9	Chrysene	2300	
117-81-7	bis(2-Ethylhexyl) Phthalate	180	J
117-84-0	Di-n-Octyl Phthalate	390	U
205-99-2	Benzo(b) Fluoranthene	2500	
207-08-9	Benzo(k) Fluoranthene	1600	
50-32-8	Benzo(a) Pyrene	1400	
193-39-5	Indeno(1,2,3-cd) Pyrene	920	
53-70-3	Dibenz(a,h) Anthracene	420	
191-24-2	Benzo(g,h,i) Perylene	400	

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000435
EPA SAMPLE NO.

BPD10

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD10

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 15 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC ACID, PENTYL ESTER	6.08	36000	JN K
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.52	37000	BJNA K
3. 4305-26-4	2-HEXANONE, 6-(ACETYLOXY)-	9.35	2700	JN K
4. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	24.42	1500	JN
5. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	29.72	1300	JN
6.	UNKNOWN	30.90	1200	J//
7.	UNKNOWN	31.28	1400	J /
8.	UNKNOWN	31.62	1800	JN
9.	UNKNOWN	31.95	1500	JN
10. 629-62-9	PENTADECANE	32.07	940	JN
11.	UNKNOWN	33.18	1300	J//
12. 82-05-3	7H-BENZ [DE] ANTHRACEN-7-ONE	33.30	1400	JN
13.	UNKNOWN	33.65	1300	JN
14.	UNKNOWN	33.73	460	J//
15. 82-05-3	7H-BENZ [DE] ANTHRACEN-7-ONE	33.97	610	JN
16. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	34.25	490	JN
17.	UNKNOWN	35.28	530	J//
18.	UNKNOWN	35.77	1000	J
19.	UNKNOWN	35.92	770	J
20.	UNKNOWN	36.38	830	J
21.	UNKNOWN	37.53	2900	JV

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001197

BPD10

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-03

Sample wt/vol: 29.7 (g/mL) G Lab File ID: J0629B07

% Moisture: 15. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 4.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	20.	U
319-85-7-----	beta-BHC	20.	U
319-86-8-----	delta-BHC	20.	U
58-89-9-----	gamma-BHC [Lindane]	20.	U
76-44-8-----	Heptachlor	20.	U
309-00-2-----	Aldrin	20.	U
1024-57-3-----	Heptachlor Epoxide	20.	U
959-98-8-----	Endosulfan I	20.	U
60-57-1-----	Dieldrin	39.	U
72-55-9-----	4,4'-DDE	39.	U
72-20-8-----	Endrin	39.	U
33213-65-9-----	Endosulfan II	39.	U
72-54-8-----	4,4'-DDD	39.	U
1031-07-8-----	Endosulfan Sulfate	39.	U
50-29-3-----	4,4'-DDT	39.	U
72-43-5-----	Methoxychlor	200.	U
53494-70-5-----	Endrin Ketone	39.	U
7421-93-4-----	Endrin Aldehyde	39.	U
5103-71-9-----	alpha-Chlordane	20.	U
5103-74-2-----	gamma-Chlordane	20.	U
8001-35-2-----	Toxaphene	2000.	U
12674-11-2-----	Aroclor-1016	390.	U
11104-28-2-----	Aroclor-1221	800.	U
11141-16-5-----	Aroclor-1232	390.	U
53469-21-9-----	Aroclor-1242	390.	U
12672-29-6-----	Aroclor-1248	390.	U
11097-69-1-----	Aroclor-1254	6900.	U
11096-82-5-----	Aroclor-1260	390.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000076
EPA SAMPLE NO.

BPD11

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04A

Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD11

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 36 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	15	UJ
74-83-9-----	Bromomethane	15	UJ
75-01-4-----	Vinyl Chloride	15	U
75-00-3-----	Chloroethane	15	U
75-09-2-----	Methylene Chloride	15 8	BO HJ
67-64-1-----	Acetone	15 5	BO HJ
75-15-0-----	Carbon Disulfide	15	UJ
75-35-4-----	1,1-Dichloroethene	15	U
75-34-3-----	1,1-Dichloroethane	15	U
540-59-0-----	1,2-Dichloroethene (total)	15	U
67-66-3-----	Chloroform	15	U
107-06-2-----	1,2-Dichloroethane	15	U
78-93-3-----	2-Butanone	15	U
71-55-6-----	1,1,1-Trichloroethane	15	U
56-23-5-----	Carbon Tetrachloride	15	U
75-27-4-----	Bromodichloromethane	15	U
78-87-5-----	1,2-Dichloropropane	15	U
10061-01-5-----	cis-1,3-Dichloropropene	15	UV
79-01-6-----	Trichloroethene	S	J
124-48-1-----	Dibromochloromethane	15	UJ
79-00-5-----	1,1,2-Trichloroethane	15	U
71-43-2-----	Benzene	15	U
10061-02-6-----	trans-1,3-Dichloropropene	15	U
75-25-2-----	Bromoform	15	U
108-10-1-----	4-Methyl-2-Pentanone	15	U
591-78-6-----	2-Hexanone	15	U
127-18-4-----	Tetrachloroethene	15	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15	U
108-88-3-----	Toluene	15	U
108-90-7-----	Chlorobenzene	15	U
100-41-4-----	Ethylbenzene	15	U
100-42-5-----	Styrene	15	U
1330-20-7-----	Xylene (total)	15	UV

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000077
EPA SAMPLE NO.

BPD11

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04A
Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD11
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 36 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8 124-3-9	METHANE, TETRANITRO- C.I.L. 124-3-9	3.33	1200	JK

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000541
EPA SAMPLE NO.

BPD11

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD11RE

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 36 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	520	U
111-44-4-----	bis(2-Chloroethyl) Ether	520	U
95-57-8-----	2-Chlorophenol	520	U
541-73-1-----	1,3-Dichlorobenzene	520	U
106-46-7-----	1,4-Dichlorobenzene	520	U
95-50-1-----	1,2-Dichlorobenzene	520	U
95-48-7-----	2-Methylphenol	520	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	520	U
106-44-5-----	4-Methylphenol	520	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	520	U
67-72-1-----	Hexachloroethane	520	U
98-95-3-----	Nitrobenzene	520	U
78-59-1-----	Isophorone	520	U
88-75-5-----	2-Nitrophenol	520	U
105-67-9-----	2,4-Dimethylphenol	520	U
111-91-1-----	bis(2-Chloroethoxy)Methane	520	U
120-83-2-----	2,4-Dichlorophenol	520	U
120-82-1-----	1,2,4-Trichlorobenzene	53	J
91-20-3-----	Naphthalene	180	J
106-47-8-----	4-Chloroaniline	520	U
87-68-3-----	Hexachlorobutadiene	520	U
59-50-7-----	4-Chloro-3-Methylphenol	520	U
91-57-6-----	2-Methylnaphthalene	310	J
77-47-4-----	Hexachlorocyclopentadiene	520	U
88-06-2-----	2,4,6-Trichlorophenol	520	U
95-95-4-----	2,4,5-Trichlorophenol	1300	U
91-58-7-----	2-Chloronaphthalene	520	U
88-74-4-----	2-Nitroaniline	1300	U
131-11-3-----	Dimethylphthalate	520	U
208-96-8-----	Acenaphthylene	53	J
606-20-2-----	2,6-Dinitrotoluene	520	U
99-09-2-----	3-Nitroaniline	1300	U
83-32-9-----	Acenaphthene	520	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000542
EPA SAMPLE NO.

BPD11

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD11RE

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 36 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: I.C

GPC Cleanup: (Y/N) Y pH: 6.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
51-28-5-----	2,4-Dinitrophenol	1300	UJ
100-02-7-----	4-Nitrophenol	1300	U
132-64-9-----	Dibenzofuran	110	J
121-14-2-----	2,4-Dinitrotoluene	520	U
84-66-2-----	Diethylphthalate	520	U
7005-72-3-----	4-Chlorophenyl-phenylether	520	U
86-73-7-----	Fluorene	49	J
100-01-6-----	4-Nitroaniline	1300	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1300	U
86-30-6-----	N-Nitrosodiphenylamine (1)	520	U
101-55-3-----	4-Bromophenyl-phenylether	520	U
118-74-1-----	Hexachlorobenzene	520	U
87-86-5-----	Pentachlorophenol	1300	U
85-01-8-----	Phenanthrene	700	
120-12-7-----	Anthracene	91	J
86-74-8-----	Carbazole	97	J
84-74-2-----	Di-n-Butylphthalate	80	J
206-44-0-----	Fluoranthene	1400	
129-00-0-----	Pyrene	920	
85-68-7-----	Butylbenzylphthalate	160	J
91-94-1-----	3,3'-Dichlorobenzidine	520	U
56-55-3-----	Benzo(a)Anthracene	590	
218-01-9-----	Chrysene	910	
117-81-7-----	bis(2-Ethylhexyl) Phthalate	1100	
117-84-0-----	Di-n-Octyl Phthalate	520	U
205-99-2-----	Benzo(b) Fluoranthene	810	
207-08-9-----	Benzo(k) Fluoranthene	540	
50-32-8-----	Benzo(a) Pyrene	520	J
193-39-5-----	Indeno(1,2,3-cd) Pyrene	520	U
53-70-3-----	Dibenz(a,h) Anthracene	520	U
191-24-2-----	Benzo(g,h,i) Perylene	520	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000543
EPA SAMPLE NO.

BPD11

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04B

Sample wt/vol: 29.7 (g/mL) G Lab File ID: BPD11RE

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 36 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 21 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC-ACID, PENTYL-ESTER	6.02	52000	JN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.45	57000	BONA
3.	UNKNOWN	35.20	770	J
4.	UNKNOWN	35.42	67	J
5.	UNKNOWN	35.58	360	J
6.	UNKNOWN	35.63	270	J
7.	UNKNOWN	35.67	220	J
5.	UNKNOWN	35.78	260	J
9.	UNKNOWN	35.85	680	J
10.	UNKNOWN	35.95	140	J
11. 630-02-4	OCTACOSANE	36.28	1800	JN
12.	UNKNOWN	36.57	82	J
13.	UNKNOWN	36.67	100	J
14.	UNKNOWN	36.70	100	J
15.	UNKNOWN	36.75	470	J
16.	UNKNOWN	37.02	240	J
17.	UNKNOWN	37.35	240	J
18.	UNKNOWN	37.38	190	J
19.	UNKNOWN	37.42	430	J
20.	UNKNOWN	37.58	1200	J
21. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	39.08	8100	JN

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001223

BPD11

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-04

Sample wt/vol: 30.5 (g/mL) G Lab File ID: J0629B08

% Moisture: 36. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	26.	U
319-85-7-----	beta-BHC	26.	U
319-86-8-----	delta-BHC	26.	U
58-89-9-----	gamma-BHC [Lindane]	26.	U
76-44-8-----	Heptachlor	26.	U
309-00-2-----	Aldrin	26.	U
1024-57-3-----	Heptachlor Epoxide	26.	U
959-98-8-----	Endosulfan I	26.	U
60-57-1-----	Dieldrin	51.	U
72-55-9-----	4,4'-DDE	51.	U
72-20-8-----	Endrin	51.	U
33213-65-9-----	Endosulfan II	51.	U
72-54-8-----	4,4'-DDD	51.	U
1031-07-8-----	Endosulfan Sulfate	51.	U
50-29-3-----	4,4'-DDT	51.	U
72-43-5-----	Methoxychlor	260.	U
53494-70-5-----	Endrin Ketone	51.	U
7421-93-4-----	Endrin Aldehyde	51.	U
5103-71-9-----	alpha-Chlordane	26.	U
5103-74-2-----	gamma-Chlordane	26.	U
8001-35-2-----	Toxaphene	2600.	U
12674-11-2-----	Aroclor-1016	510.	U
11104-28-2-----	Aroclor-1221	1000.	U
11141-16-5-----	Aroclor-1232	510.	U
53469-21-9-----	Aroclor-1242	510.	U
12672-29-6-----	Aroclor-1248	510.	U
11097-69-1-----	Aroclor-1254	20000.	X
11096-82-5-----	Aroclor-1260	510.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000085
EPA SAMPLE NO.

BPD12

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05A
Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD12
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 12 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3-----	Chloromethane	11	UJ
74-83-9-----	Bromomethane	11	UJ
75-01-4-----	Vinyl Chloride	11	UJ
75-00-3-----	Chloroethane	11	UJ
75-09-2-----	Methylene Chloride	21	BHS
67-64-1-----	Acetone	11	BHS
75-15-0-----	Carbon Disulfide	11	0.7 BHS
75-35-4-----	1,1-Dichloroethene	11	UJ
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	UV
79-01-6-----	Trichloroethene	1	J
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (total)	11	UV

000086

EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD12

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05ASample wt/vol: 5.2 (g/mL) G Lab File ID: BPD12Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. 12 Date Analyzed: 06/25/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 3CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8	METHANE, TETRANITRO	3.32	370	JN/K
2. 556-67-2	CYCLOTETRASILOXANE, OCTAMETH	23.90	13	JN
3. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.33	270	JN

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000591
EPA SAMPLE NO.

BPD12

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05B

Sample wt/vol: 1.1 (g/mL) G Lab File ID: BPD12

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
108-95-2	Phenol	10000	U
111-44-4	bis(2-Chloroethyl) Ether	10000	U
95-57-8	2-Chlorophenol	10000	U
541-73-1	1,3-Dichlorobenzene	10000	U
106-46-7	1,4-Dichlorobenzene	10000	U
95-50-1	1,2-Dichlorobenzene	10000	U
95-48-7	2-Methylphenol	10000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10000	U
106-44-5	4-Methylphenol	10000	U
621-64-7	N-Nitroso-Di-n-Propylamine	10000	U
67-72-1	Hexachloroethane	10000	U
98-95-3	Nitrobenzene	10000	U
78-59-1	Isophorone	10000	U
88-75-5	2-Nitrophenol	10000	U
105-67-9	2,4-Dimethylphenol	10000	U
111-91-1	bis(2-Chloroethoxy) Methane	10000	U
120-83-2	2,4-Dichlorophenol	10000	U
120-82-1	1,2,4-Trichlorobenzene	10000	U
91-20-3	Naphthalene	10000	U
106-47-8	4-Chloroaniline	10000	U
87-68-3	Hexachlorobutadiene	10000	U
59-50-7	4-Chloro-3-Methylphenol	10000	U
91-57-6	2-Methylnaphthalene	10000	U
77-47-4	Hexachlorocyclopentadiene	10000	U
88-06-2	2,4,6-Trichlorophenol	10000	U
95-95-4	2,4,5-Trichlorophenol	26000	U
91-58-7	2-Chloronaphthalene	10000	U
88-74-4	2-Nitroaniline	26000	U
131-11-3	Dimethylphthalate	10000	U
208-96-8	Acenaphthylene	10000	U
606-20-2	2,6-Dinitrotoluene	10000	U
99-09-2	3-Nitroaniline	26000	U
83-32-9	Acenaphthene	10000	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000592
EPA SAMPLE NO.

BPD12

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05B

Sample wt/vol: 1.1 (g/mL) G Lab File ID: BPD12

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	26000	U
100-02-7-----	4-Nitrophenol	26000	U
132-64-9-----	Dibenzofuran	10000	U
121-14-2-----	2,4-Dinitrotoluene	10000	U
84-66-2-----	Diethylphthalate	10000	U
7005-72-3-----	4-Chlorophenyl-phenylether	10000	U
86-73-7-----	Fluorene	10000	U
100-01-6-----	4-Nitroaniline	26000	U
534-52-1-----	4,6-Dinitro-2-methylphenol	26000	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10000	U
101-55-3-----	4-Bromophenyl-phenylether	10000	U
118-74-1-----	Hexachlorobenzene	10000	U
87-86-5-----	Pentachlorophenol	26000	U
85-01-8-----	Phenanthrene	10000	U
120-12-7-----	Anthracene	10000	U
86-74-8-----	Carbazole	10000	U
84-74-2-----	Di-n-Butylphthalate	10000	U
206-44-0-----	Fluoranthene	10000	U
129-00-0-----	Pyrene	10000	U
85-68-7-----	Butylbenzylphthalate	10000	U
91-94-1-----	3,3'-Dichlorobenzidine	10000	U
56-55-3-----	Benzo(a)Anthracene	10000	U
218-01-9-----	Chrysene	10000	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	10000	U
117-84-0-----	Di-n-Octyl Phthalate	10000	U
205-99-2-----	Benzo(b) Fluoranthene	10000	U
207-08-9-----	Benzo(k) Fluoranthene	10000	U
50-32-8-----	Benzo(a) Pyrene	10000	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	10000	U
53-70-3-----	Dibenz(a,h) Anthracene	10000	U
191-24-2-----	Benzo(g,h,i) Perylene	10000	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000593
EPA SAMPLE NO.

BPD12

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05B

Sample wt/vol: 1.1 (g/mL) G Lab File ID: BPD12

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/09/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 20 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.12	67000	JN
2. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.23	18000	JN
3. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.67	32000	JN
4.	UNKNOWN	29.00	22000	JN/
5. 52663-58-8	1,1'-BIPHENYL, 2,3,4',6-TETR	29.60	12000	JN
6. 32598-13-3	1,1'-BIPHENYL, 3,3',4,4'-TET	29.70	25000	JN
7. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	29.82	94000	JN
8.	UNKNOWN	30.25	34000	JN/
9. 38380-02-8	1,1'-BIPHENYL, 2,2',3,4,5'-P	30.40	130000	JN
10. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.53	32000	JN
11. 52663-62-4	1,1'-BIPHENYL, 2,2',3,3',4-P	30.95	25000	JN
12. 38380-02-8	1,1'-BIPHENYL, 2,2',3,4,5'-P	31.10	51000	JN
13. 60145-20-2	1,1'-BIPHENYL, 2,2',3,3',5-P	31.22	8300	JN
14. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.35	110000	JN
15.	UNKNOWN	31.65	14000	JN/
16. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.98	130000	JN
17. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	32.53	46000	JN
18. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	32.67	58000	JN
19. 56030-56-9	1,1'-BIPHENYL, 2,2',3,4,4',6	33.23	82000	JN
20. 35065-27-1	1,1'-BIPHENYL, 2,2',4,4',5,5	33.92	15000	JN

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001264

BPD12DL

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-05

Sample wt/vol: 30.3 (g/mL) G Lab File ID: J0630B09

% Moisture: 12. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 07/01/94

Injection Volume: 2.0 (uL) Dilution Factor: 10000.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	19000.	U
319-85-7-----	beta-BHC	19000.	U
319-86-8-----	delta-BHC	19000.	U
58-89-9-----	gamma-BHC [Lindane]	19000.	U
76-44-8-----	Heptachlor	19000.	U
309-00-2-----	Aldrin	19000.	U
1024-57-3-----	Heptachlor Epoxide	19000.	U
959-98-8-----	Endosulfan I	19000.	U
60-57-1-----	Dieldrin	37000.	U
72-55-9-----	4,4'-DDE	37000.	U
72-20-8-----	Endrin	37000.	U
33213-65-9-----	Endosulfan II	37000.	U
72-54-8-----	4,4'-DDD	37000.	U
1031-07-8-----	Endosulfan Sulfate	37000.	U
50-29-3-----	4,4'-DDT	37000.	U
72-43-5-----	Methoxychlor	190000.	U
53494-70-5-----	Endrin Ketone	37000.	U
7421-93-4-----	Endrin Aldehyde	37000.	U
5103-71-9-----	alpha-Chlordane	19000.	U
5103-74-2-----	gamma-Chlordane	19000.	U
8001-35-2-----	Toxaphene	1900000.	U
12674-11-2-----	Aroclor-1016	370000.	U
11104-28-2-----	Aroclor-1221	750000.	U
11141-16-5-----	Aroclor-1232	370000.	U
53469-21-9-----	Aroclor-1242	370000.	U
12672-29-6-----	Aroclor-1248	370000.	U
11097-69-1-----	Aroclor-1254	1100000.	U
11096-82-5-----	Aroclor-1260	370000.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000097
EPA SAMPLE NO.

BPD25

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06A

Sample wt/vol: 5.3 (g/mL) G Lab File ID: BPD25

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 12 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
74-87-3	Chloromethane	11	U J
74-83-9	Bromomethane	11	U J
75-01-4	Vinyl Chloride	11	U J
75-00-3	Chloroethane	11	U J
75-09-2	Methylene Chloride	11 10	BOWS
67-64-1	Acetone	11 4	BOWS
75-15-0	Carbon Disulfide	11 0.5	BOWS
75-35-4	1,1-Dichloroethene	11	U J
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U V

000098

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD25

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06ASample wt/vol: 5.3 (g/mL) G Lab File ID: BPD25Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. 12 Date Analyzed: 06/25/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8	METHANE, TETRANITRO-	3.35	260	JN
2. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.35	26	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000620
EPA SAMPLE NO.

BPD25

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: BPD25

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) Ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) Methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	370	U
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-Methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000621
EPA SAMPLE NO.

BPD25

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: BPD25

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
51-28-5-----	2,4-Dinitrophenol	900	U
100-02-7-----	4-Nitrophenol	900	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	900	U
534-52-1-----	4,6-Dinitro-2-methylphenol	900	U
86-30-6-----	N-Nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	900	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-Butylphthalate	44	J
206-44-0-----	Fluoranthene	200	J
129-00-0-----	Pyrene	150	J
85-68-7-----	Butylbenzylphthalate	27	J
91-94-1-----	3,3'-Dichlorobenzidine	370	U
56-55-3-----	Benzo(a)Anthracene	91	J
218-01-9-----	Chrysene	130	J
117-81-7-----	bis(2-Ethylhexyl) Phthalate	140	J
117-84-0-----	Di-n-Octyl Phthalate	370	U
205-99-2-----	Benzo(b) Fluoranthene	110	J
207-08-9-----	Benzo(k) Fluoranthene	88	J
50-32-8-----	Benzo(a) Pyrene	100	J
193-39-5-----	Indeno(1,2,3-cd) Pyrene	65	J
53-70-3-----	Dibenz(a,h) Anthracene	370	U
191-24-2-----	Benzo(g,h,i) Perylene	370	U

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 000822

BPD25

Lab Name: RASI Contract: 68-D2-0014
 Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
 Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06B
 Sample wt/vol: 30.2 (g/mL) G Lab File ID: BPD25
 Level: (low/med) LOW Date Received: 06/09/94
 % Moisture: 12 decanted: (Y/N) N Date Extracted: 06/13/94
 Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 5.6

Number TICs found: 21 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC ACID, PENTYL ESTER	6.00	31000	JN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.45	34000	BJN
3. 57266-86-1	2-HEPTENAL, (Z)-	7.68	260	BJN
4. 4305-26-4	2-HEXANONE, 6-(ACETYLOXY)-	9.27	2200	JN
5. 10150-87-5	2-BUTANONE, 4-(ACETYLOXY)-	11.88	730	BJN
6. 54699-28-4	BUTANE, 2,2'-[METHYLENESIS(O	20.27	260	JN
7. 57-10-3	HEXADECANOIC ACID	27.82	270	JN
8. 68194-06-9	1,1'-BIPHENYL, 2,2',4,5,6'-P	30.20	350	JN
9. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.15	370	JN
10. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.78	470	JN
11. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	32.33	200	JN
12. 56558-17-9	1,1'-BIPHENYL, 2,3',4,4',6-P	32.47	220	JN
13. 481-74-3	9,10-ANTHRACENEDIONE, 1,8-DI	32.83	81	JN
14. 56030-56-9	1,1'-BIPHENYL, 2,2',3,4,4',6	33.03	570	JN
15.	UNKNOWN	35.52	190	JN
16.	UNKNOWN	36.22	220	JN
17.	UNKNOWN	36.98	610	JN
18. 31295-56-4	DODECANE, 2,6,11-TRIMETHYL-	38.97	610	JN
19.	UNKNOWN	39.20	70	JN
20. 17301-30-3	UNDECANE, 3,8-DIMETHYL-	42.95	480	JN
21.	UNKNOWN	48.12	6200	JN

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD25

Lab Name: Ross Analytical Services Contract: 68-D2-0014.

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-06

Sample wt/vol: 30.5 (g/mL) G Lab File ID: J0629B10

% Moisture: 12. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	19.	U
319-85-7-----	beta-BHC	19.	U
319-86-8-----	delta-BHC	19.	U
58-89-9-----	gamma-BHC [Lindane]	19.	U
76-44-8-----	Heptachlor	19.	U
309-00-2-----	Aldrin	19.	U
1024-57-3-----	Heptachlor Epoxide	19.	U
959-98-8-----	Endosulfan I	19.	U
60-57-1-----	Dieldrin	37.	U
72-55-9-----	4,4'-DDE	37.	U
72-20-8-----	Endrin	37.	U
33213-65-9-----	Endosulfan II	37.	U
72-54-8-----	4,4'-DDD	37.	U
1031-07-8-----	Endosulfan Sulfate	37.	U
50-29-3-----	4,4'-DDT	37.	U
72-43-5-----	Methoxychlor	190.	U
53494-70-5-----	Endrin Ketone	37.	U
7421-93-4-----	Endrin Aldehyde	37.	U
5103-71-9-----	alpha-Chlordane	19.	U
5103-74-2-----	gamma-Chlordane	19.	U
8001-35-2-----	Toxaphene	1900.	U
12674-11-2-----	Aroclor-1016	370.	U
11104-28-2-----	Aroclor-1221	750.	U
11141-16-5-----	Aroclor-1232	370.	U
53469-21-9-----	Aroclor-1242	370.	U
12672-29-6-----	Aroclor-1248	370.	U
11097-69-1-----	Aroclor-1254	8200.	U
11096-82-5-----	Aroclor-1260	370.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPD26

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPD26

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 12 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	11	UJ
74-83-9-----	Bromomethane	11	UJ
75-01-4-----	Vinyl Chloride	11	UJ
75-00-3-----	Chloroethane	11	UJ
75-09-2-----	Methylene Chloride	27	BUJ
67-64-1-----	Acetone	11	BUJ
75-15-0-----	Carbon Disulfide	11	BUJ
75-35-4-----	1,1-Dichloroethene	11	UJ
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	UV
79-01-6-----	Trichloroethene	2	J
124-48-1-----	Dibromochloromethane	11	J
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	UV
108-88-3-----	Toluene	0.5	J
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD26

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07ASample wt/vol: 5.0 (g/mL) G Lab File ID: BPD26Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. 12 Date Analyzed: 06/25/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8	METHANE, TETRANITRO	3.33	410	JN ✓
2. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.33	37	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000661

BPD26

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD26

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
108-95-2	Phenol	11000	U
111-44-4	bis(2-Chloroethyl) Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1,3-Dichlorobenzene	11000	U
106-46-7	1,4-Dichlorobenzene	11000	U
95-50-1	1,2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2,4-Dimethylphenol	11000	U
111-91-1	bis(2-Chloroethoxy) Methane	11000	U
120-83-2	2,4-Dichlorophenol	11000	U
120-82-1	1,2,4-Trichlorobenzene	11000	U
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2,4,6-Trichlorophenol	11000	U
95-95-4	2,4,5-Trichlorophenol	28000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	28000	U
131-11-3	Dimethylphthalate	11000	U
208-96-8	Acenaphthylene	11000	U
606-20-2	2,6-Dinitrotoluene	11000	U
99-09-2	3-Nitroaniline	28000	U
83-32-9	Acenaphthene	11000	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000662

BPD26

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD26

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	28000	UT
100-02-7-----	4-Nitrophenol	28000	U
132-64-9-----	Dibenzofuran	11000	U
121-14-2-----	2,4-Dinitrotoluene	11000	U
84-66-2-----	Diethylphthalate	11000	U
7005-72-3-----	4-Chlorophenyl-phenylether	11000	U
86-73-7-----	Fluorene	11000	U
100-01-6-----	4-Nitroaniline	28000	U
534-52-1-----	4,6-Dinitro-2-methylphenol	28000	U
86-30-6-----	N-Nitrosodiphenylamine (1)	11000	U
101-55-3-----	4-Bromophenyl-phenylether	11000	U
118-74-1-----	Hexachlorobenzene	11000	U
87-86-5-----	Pentachlorophenol	28000	U
85-01-8-----	Phenanthrene	11000	U
120-12-7-----	Anthracene	11000	U
86-74-8-----	Carbazole	11000	U
84-74-2-----	Di-n-Butylphthalate	11000	U
206-44-0-----	Fluoranthene	11000	U
129-00-0-----	Pyrene	11000	U
85-68-7-----	Butylbenzylphthalate	11000	U
91-94-1-----	3,3'-Dichlorobenzidine	11000	U
56-55-3-----	Benzo(a)Anthracene	11000	U
218-01-9-----	Chrysene	11000	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	11000	U
117-84-0-----	Di-n-Octyl Phthalate	11000	U
205-99-2-----	Benzo(b) Fluoranthene	11000	U
207-08-9-----	Benzo(k) Fluoranthene	11000	U
50-32-8-----	Benzo(a) Pyrene	11000	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	11000	U
53-70-3-----	Dibenz(a,h) Anthracene	11000	U
191-24-2-----	Benzo(g,h,i) Perylene	11000	U

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000663

BPD26

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD26

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

Number TICs found: 20 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 25323-68-6	1,1'-BIPHENYL, TRICHLORO-	27.07	12000	JN
2. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.00	58000	JN
3. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.12	18000	JN
4. 26914-33-0	1,1'-BIPHENYL, TETRACHLORO-	28.55	30000	JN
5. 52663-59-9	1,1'-BIPHENYL, 2,2',3,4-TETR	28.88	19000	JN
6. 33284-54-7	1,1'-BIPHENYL, 2,3,5,6-TETRA	29.58	18000	JN
7. 38380-02-8	1,1'-BIPHENYL, 2,2',3,4,5'-P	29.72	83000	JN
8.	UNKNOWN	30.13	36000	JN
9. 68194-06-9	1,1'-BIPHENYL, 2,2',4,5,6'-P	30.28	120000	JN
10. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.42	28000	JN
11. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.85	21000	JN
12. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.98	45000	JN
13. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.23	110000	JN
14.	UNKNOWN	31.53	11000	JN
15. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.88	120000	JN
16. 56030-56-9	1,1'-BIPHENYL, 2,2',3,4,4',6	32.43	37000	JN
17.	UNKNOWN	32.55	51000	JN
18.	UNKNOWN	33.13	110000	JN
19. 35065-27-1	1,1'-BIPHENYL, 2,2',4,4',5,5	33.80	12000	JN
20.	UNKNOWN	38.15	27000	JN R

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001312

BPD26DL

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-07

Sample wt/vol: 30.9 (g/mL) G Lab File ID: J0630B11

% Moisture: 12. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 07/01/94

Injection Volume: 2.0 (uL) Dilution Factor: 10000.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----alpha-BHC	19000.	U
319-85-7-----beta-BHC	19000.	U
319-86-8-----delta-BHC	19000.	U
58-89-9-----gamma-BHC [Lindane]	19000.	U
76-44-8-----Heptachlor	19000.	U
309-00-2-----Aldrin	19000.	U
1024-57-3-----Heptachlor Epoxide	19000.	U
959-98-8-----Endosulfan I	19000.	U
60-57-1-----Dieldrin	36000.	U
72-55-9-----4,4'-DDE	36000.	U
72-20-8-----Endrin	36000.	U
33213-65-9-----Endosulfan II	36000.	U
72-54-8-----4,4'-DDD	36000.	U
1031-07-8-----Endosulfan Sulfate	36000.	U
50-29-3-----4,4'-DDT	36000.	U
72-43-5-----Methoxychlor	190000.	U
53494-70-5-----Endrin Ketone	36000.	U
7421-93-4-----Endrin Aldehyde	36000.	U
5103-71-9-----alpha-Chlordane	19000.	U
5103-74-2-----gamma-Chlordane	19000.	U
8001-35-2-----Toxaphene	1900000.	U
12674-11-2-----Aroclor-1016	360000.	U
11104-28-2-----Aroclor-1221	740000.	U
11141-16-5-----Aroclor-1232	360000.	U
53469-21-9-----Aroclor-1242	360000.	U
12672-29-6-----Aroclor-1248	360000.	U
11097-69-1-----Aroclor-1254	II00000.	B' D
11096-82-5-----Aroclor-1260	360000.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000119
EPA SAMPLE NO.

BPD31

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08A
Sample wt/vol: 5.3 (g/mL) G Lab File ID: BDP31RE
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 38 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	15 UJ
74-83-9	Bromomethane	15 UJ
75-01-4	Vinyl Chloride	15 UJ
75-00-3	Chloroethane	15 UJ
75-09-2	Methylene Chloride	15 8 BUJ
67-64-1	Acetone	16 BUJ
75-15-0	Carbon Disulfide	15 0.8 BUJ
75-35-4	1,1-Dichloroethene	15 UJ
75-34-3	1,1-Dichloroethane	1 J
540-59-0	1,2-Dichloroethene (total)	51 J
67-66-3	Chloroform	15 U
107-06-2	1,2-Dichloroethane	15 U
78-93-3	2-Butanone	15 U
71-55-6	1,1,1-Trichloroethane	0.5 J
56-23-5	Carbon Tetrachloride	15 U
75-27-4	Bromodichloromethane	15 U
78-87-5	1,2-Dichloropropane	15 U
10061-01-5	cis-1,3-Dichloropropene	15 U
79-01-6	Trichloroethene	120 BU
124-48-1	Dibromochloromethane	15 U
79-00-5	1,1,2-Trichloroethane	15 U
71-43-2	Benzene	15 U
10061-02-6	trans-1,3-Dichloropropene	15 U
75-25-2	Bromoform	15 U
108-10-1	4-Methyl-2-Pentanone	15 U
591-78-6	2-Hexanone	15 U
127-18-4	Tetrachloroethene	9 J
79-34-5	1,1,2,2-Tetrachloroethane	15 U
108-88-3	Toluene	15 U
108-90-7	Chlorobenzene	15 U
100-41-4	Ethylbenzene	15 U
100-42-5	Styrene	15 U
1330-20-7	Xylene (total)	15 U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000120
EPA SAMPLE NO.

BPD31

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08A
Sample wt/vol: 5.3 (g/mL) G Lab File ID: BDP31RE
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 38 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 3 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 124-38-9	CARBON DIOXIDE	3.33	810	BJN-K
2. 624-92-0	DISULFIDE, DIMETHYL	18.90	11	JN
3. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.32	20	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000691

BPD31

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD31

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
108-95-2	Phenol	16000	U
111-44-4	bis(2-Chloroethyl) Ether	16000	U
95-57-8	2-Chlorophenol	16000	U
541-73-1	1,3-Dichlorobenzene	16000	U
106-46-7	1,4-Dichlorobenzene	16000	U
95-50-1	1,2-Dichlorobenzene	16000	U
95-48-7	2-Methylphenol	16000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	16000	U
106-44-5	4-Methylphenol	16000	U
621-64-7	N-Nitroso-Di-n-Propylamine	16000	U
67-72-1	Hexachloroethane	16000	U
98-95-3	Nitrobenzene	16000	U
78-59-1	Isophorone	16000	U
88-75-5	2-Nitrophenol	16000	U
105-67-9	2,4-Dimethylphenol	16000	U
111-91-1	bis(2-Chloroethoxy) Methane	16000	U
120-83-2	2,4-Dichlorophenol	16000	U
120-82-1	1,2,4-Trichlorobehzene	5400	J
91-20-3	Naphthalene	16000	U
106-47-8	4-Chloroaniline	16000	U
87-68-3	Hexachlorobutadiene	16000	U
59-50-7	4-Chloro-3-Methylphenol	16000	U
91-57-6	2-Methylnaphthalene	16000	U
77-47-4	Hexachlorocyclopentadiene	16000	U
88-06-2	2,4,6-Trichlorophenol	16000	U
95-95-4	2,4,5-Trichlorophenol	40000	U
91-58-7	2-Chloronaphthalene	16000	U
88-74-4	2-Nitroaniline	40000	U
131-11-3	Dimethylphthalate	16000	U
208-96-8	Acenaphthylene	16000	U
606-20-2	2,6-Dinitrotoluene	16000	U
99-09-2	3-Nitroaniline	40000	U
83-32-9	Acenaphthene	16000	U

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000692

BPD31

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD31

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
51-28-5-----	2,4-Dinitrophenol	40000	UJ
100-02-7-----	4-Nitrophenol	40000	U
132-64-9-----	Dibenzofuran	16000	U
121-14-2-----	2,4-Dinitrotoluene	16000	U
84-66-2-----	Diethylphthalate	16000	U
7005-72-3-----	4-Chlorophenyl-phenylether	16000	U
86-73-7-----	Fluorene	16000	U
100-01-6-----	4-Nitroaniline	40000	U
534-52-1-----	4,6-Dinitro-2-methylphenol	40000	UJ
86-30-6-----	N-Nitrosodiphenylamine (1)	16000	U
101-55-3-----	4-Bromophenyl-phenylether	16000	U
118-74-1-----	Hexachlorobenzene	16000	U
87-86-5-----	Pentachlorophenol	40000	U
85-01-8-----	Phenanthrene	16000	U
120-12-7-----	Anthracene	16000	U
86-74-8-----	Carbazole	16000	U
84-74-2-----	Di-n-Butylphthalate	16000	U
206-44-0-----	Fluoranthene	1400	J
129-00-0-----	Pyrene	16000	U
85-68-7-----	Butylbenzylphthalate	16000	U
91-94-1-----	3,3'-Dichlorobenzidine	16000	U
56-55-3-----	Benzo(a)Anthracene	16000	U
218-01-9-----	Chrysene	16000	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	9400	BJ
117-84-0-----	Di-n-Octyl Phthalate	16000	U
205-99-2-----	Benzo(b)Fluoranthene	16000	U
207-08-9-----	Benzo(k)Fluoranthene	16000	U
50-32-8-----	Benzo(a)Pyrene	16000	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	16000	U
53-70-3-----	Dibenz(a,h)Anthracene	16000	U
191-24-2-----	Benzo(g,h,i)Perylene	16000	U

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000693

BPD31

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08B

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BPD31

Level: (low/med) MED Date Received: 06/09/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 06/15/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/11/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 21 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.25	10000	BJNA K
2.	UNKNOWN	7.72	13000	J K
3. 930-68-7	2-CYCLOHEXEN-1-ONE	9.67	4900	BON K
4. 41464-39-5	1,1'-BIPHENYL, 2,2',3,5'-TET	28.12	6000	JN
5. 41464-39-5	1,1'-BIPHENYL, 2,2',3,5'-TET	28.55	7900	JN
6. 41464-43-1	1,1'-BIPHENYL, 2,3,3',4'-TET	28.87	5600	JN
7. 52663-59-9	1,1'-BIPHENYL, 2,2',3,4-TETR	29.58	14000	JN
8.	UNKNOWN	30.13	13000	J//
9. 60145-21-3	1,1'-BIPHENYL, 2,2',4,5',6-P	30.28	100000	JN
10. 60145-20-2	1,1'-BIPHENYL, 2,2',3,3',5-P	30.85	20000	JN
11. 60145-20-2	1,1'-BIPHENYL, 2,2',3,3',5-P	30.98	38000	JN
12. 55215-17-3	1,1'-BIPHENYL, 2,2',3,4,6-PE	31.10	4200	JN
13. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.23	96000	JN
14.	UNKNOWN	31.53	7200	J//
15.	UNKNOWN	31.65	4300	J//
16. 25429-29-2	1,1'-BIPHENYL, PENTACHLORO-	31.88	120000	JN
17. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	32.43	35000	JN
18.	UNKNOWN	32.55	46000	J//
19.	UNKNOWN	33.13	110000	J//
20. 26601-64-9	1,1'-BIPHENYL, HEXACHLORO-	33.80	12000	JN
21.	UNKNOWN	39.12	8500	J//

n5

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001323

BPD31

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-08

Sample wt/vol: 30.7 (g/mL) G Lab File ID: J0629B12

% Moisture: 38. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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319-84-6-----	alpha-BHC	27.	U
319-85-7-----	beta-BHC	27.	U
319-86-8-----	delta-BHC	27.	U
58-89-9-----	gamma-BHC [Lindane]	27.	U
76-44-8-----	Heptachlor	27.	U
309-00-2-----	Aldrin	27.	U
1024-57-3-----	Heptachlor Epoxide	27.	U
959-98-8-----	Endosulfan I	27.	U
60-57-1-----	Dieldrin	52.	U
72-55-9-----	4,4'-DDE	52.	U
72-20-8-----	Endrin	52.	U
33213-65-9-----	Endosulfan II	52.	U
72-54-8-----	4,4'-DDD	52.	U
1031-07-8-----	Endosulfan Sulfate	52.	U
50-29-3-----	4,4'-DDT	52.	U
72-43-5-----	Methoxychlor	270.	U
53494-70-5-----	Endrin Ketone	52.	U
7421-93-4-----	Endrin Aldehyde	52.	U
5103-71-9-----	alpha-Chlordane	27.	U
5103-74-2-----	gamma-Chlordane	27.	U
8001-35-2-----	Toxaphene	2700.	U
12674-11-2-----	Aroclor-1016	520.	U
11104-28-2-----	Aroclor-1221	1100.	U
11141-16-5-----	Aroclor-1232	520.	U
53469-21-9-----	Aroclor-1242	520.	U
12672-29-6-----	Aroclor-1248	520.	U
11097-69-1-----	Aroclor-1254	550,000	U
11096-82-5-----	Aroclor-1260	190000	U
		520.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000137
EPA SAMPLE NO.

BPD32

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09A

Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD32

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 56 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	22	UJ
74-83-9-----	Bromomethane	22	UJ
75-01-4-----	Vinyl Chloride	22	UJ
75-00-3-----	Chloroethane	22	UJ
75-09-2-----	Methylene Chloride	22	UJ
67-64-1-----	Acetone	22	UJ
75-15-0-----	Carbon Disulfide	22	U
75-35-4-----	1,1-Dichloroethene	22	U
75-34-3-----	1,1-Dichloroethane	22	U
540-59-0-----	1,2-Dichloroethene (total)	23	
67-66-3-----	Chloroform	22	U
107-06-2-----	1,2-Dichloroethane	22	U
78-93-3-----	2-Butanone	22	U
71-55-6-----	1,1,1-Trichloroethane	22	U
56-23-5-----	Carbon Tetrachloride	22	U
75-27-4-----	Bromodichloromethane	22	U
78-87-5-----	1,2-Dichloropropane	22	U
10061-01-5-----	cis-1,3-Dichloropropene	22	UJ
79-01-6-----	Trichloroethene	7	J
124-48-1-----	Dibromochloromethane	22	UJ
79-00-5-----	1,1,2-Trichloroethane	22	U
71-43-2-----	Benzene	22	U
10061-02-6-----	trans-1,3-Dichloropropene	22	U
75-25-2-----	Bromoform	22	U
108-10-1-----	4-Methyl-2-Pentanone	22	U
591-78-6-----	2-Hexanone	22	U
127-18-4-----	Tetrachloroethene	22	U
79-34-5-----	1,1,2,2-Tetrachloroethane	22	U
108-88-3-----	Toluene	22	U
108-90-7-----	Chlorobenzene	22	U
100-41-4-----	Ethylbenzene	22	U
100-42-5-----	Styrene	22	U
1330-20-7-----	Xylene (total)	22	UJ

177

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000138
EPA SAMPLE NO.

BPD32

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09A
Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD32
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: not dec. 56 Date Analyzed: 06/25/94
GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 589-14-9	METHANE, TETRANITRO-	3.37	1700	JN/K
2. 491-52-0	N- (TRIFLUOROACETYL) -N,O,O'-T	27.33	20	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000724

BPD32

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: BPD32

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 56 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
108-95-2	Phenol	740	U
111-44-4	bis(2-Chloroethyl) Ether	740	U
95-57-8	2-Chlorophenol	740	U
541-73-1	1,3-Dichlorobenzene	740	U
106-46-7	1,4-Dichlorobenzene	740	U
95-50-1	1,2-Dichlorobenzene	740	U
95-48-7	2-Methylphenol	740	U
108-60-1	2,2'-oxybis(1-Chloropropane)	740	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitroso-Di-n-Propylamine	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
58-75-5	2-Nitrophenol	740	U
105-67-9	2,4-Dimethylphenol	740	U
111-91-1	bis(2-Chloroethoxy) Methane	740	U
120-83-2	2,4-Dichlorophenol	740	U
120-82-1	1,2,4-Trichlorobenzene	740	U
91-20-3	Naphthalene	740	U
106-47-8	4-Chloroaniline	740	U
87-68-3	Hexachlorobutadiene	740	U
59-50-7	4-Chloro-3-Methylphenol	740	U
91-57-6	2-Methylnaphthalene	23	J
77-47-4	Hexachlorocyclopentadiene	740	U
88-06-2	2,4,6-Trichlorophenol	740	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	740	U
208-96-8	Acenaphthylene	740	U
606-20-2	2,6-Dinitrotoluene	740	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	740	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000723

BPD32

Lab Name: RASI Contract: 68-D2-0014
 Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
 Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09B
 Sample wt/vol: 30.4 (g/mL) G Lab File ID: BPD32
 Level: (low/med) LOW Date Received: 06/09/94
 % Moisture: 56 decanted: (Y/N) N Date Extracted: 06/13/94
 Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 6.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
51-28-5-----	2,4-Dinitrophenol	1800	UJ
100-02-7-----	4-Nitrophenol	1800	U
132-64-9-----	Dibenzofuran	740	U
121-14-2-----	2,4-Dinitrotoluene	740	U
84-66-2-----	Diethylphthalate	740	U
7005-72-3-----	4-Chlorophenyl-phenylether	740	U
86-73-7-----	Fluorene	740	U
100-01-6-----	4-Nitroaniline	1800	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1800	U
86-30-6-----	N-Nitrosodiphenylamine (1)	740	U
101-55-3-----	4-Bromophenyl-phenylether	740	U
118-74-1-----	Hexachlorobenzene	740	U
87-86-5-----	Pentachlorophenol	1800	U
85-01-8-----	Phenanthrene	260	J
120-12-7-----	Anthracene	46	J
86-74-8-----	Carbazole	740	U
84-74-2-----	Di-n-Butylphthalate	280	J
206-44-0-----	Fluoranthene	720	J
129-00-0-----	Pyrene	490	J
85-68-7-----	Butylbenzylphthalate	8100 6700	E
91-94-1-----	3,3'-Dichlorobenzidine	740	U
56-55-3-----	Benzo (a) Anthracene	270	J
218-01-9-----	Chrysene	420	J
117-81-7-----	bis(2-Ethylhexyl) Phthalate	5400 32000	E
117-84-0-----	Di-n-Octyl Phthalate	7600 9700	E
205-99-2-----	Benzo (b) Fluoranthene	450	J
207-08-9-----	Benzo (k) Fluoranthene	320	J
50-32-8-----	Benzo (a) Pyrene	300	J
193-39-5-----	Indeno (1,2,3-cd) Pyrene	740	U
53-70-3-----	Dibenz (a,h) Anthracene	740	U
191-24-2-----	Benzo (g,h,i) Perylene	740	U

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000726

BPD32

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: BPD32

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 56 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 21 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-92-2	1-BUTANOL, 3-METHYL-, ACETAT	6.00	65000	B/JN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.45	72000	B/JN
3.	UNKNOWN	33.72	3700	J//
4. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	33.85	5800	JN
5.	UNKNOWN	33.95	7900	J//
6.	UNKNOWN	34.07	4100	J
7.	UNKNOWN	35.02	3400	J
8.	UNKNOWN	35.15	2900	J
9.	UNKNOWN	35.20	1900	J
10.	UNKNOWN	35.88	8200	J✓
11. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	36.03	2900	JN
12.	UNKNOWN	36.52	2300	J//
13.	UNKNOWN	37.00	1200	J//
14. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	37.23	1100	JN
15.	UNKNOWN	37.40	3000	J//
16. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	37.60	3300	JN
17. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	37.95	1000	JN
18.	UNKNOWN	38.22	1800	J
19. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	38.47	3100	JN
20.	UNKNOWN	38.58	3500	J//
21.	UNKNOWN	38.72	820	J//

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001346

BPD32

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-09

Sample wt/vol: 30.1 (g/mL) G Lab File ID: J0630B14

% Moisture: 56. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 07/01/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6	-----alpha-BHC	3.9	U
319-85-7	-----beta-BHC	3.9	U
319-86-8	-----delta-BHC	3.9	U
58-89-9	-----gamma-BHC [Lindane]	3.9	U
76-44-8	-----Heptachlor	3.9	U
309-00-2	-----Aldrin	3.9	U
1024-57-3	-----Heptachlor Epoxide	3.9	U
959-98-8	-----Endosulfan I	3.9	U
60-57-1	-----Dieldrin	7.5	U
72-55-9	-----4,4'-DDE	7.5	U
72-20-8	-----Endrin	7.5	U
33213-65-9	-----Endosulfan II	7.5	U
72-54-8	-----4,4'-DDD	7.5	U
1031-07-8	-----Endosulfan Sulfate	7.5	U
50-29-3	-----4,4'-DDT	7.5	U
72-43-5	-----Methoxychlor	39.	U
53494-70-5	-----Endrin Ketone	7.5	U
7421-93-4	-----Endrin Aldehyde	7.5	U
5103-71-9	-----alpha-Chlordane	3.9	U
5103-74-2	-----gamma-Chlordane	3.9	U
8001-35-2	-----Toxaphene	390.	U
12674-11-2	-----Aroclor-1016	75.	U
11104-28-2	-----Aroclor-1221	150.	U
11141-16-5	-----Aroclor-1232	75.	U
53469-21-9	-----Aroclor-1242	75.	U
12672-29-6	-----Aroclor-1248	75.	U
11097-69-1	-----Aroclor-1254	3700.	B
11096-82-5	-----Aroclor-1260	75.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000147
EPA SAMPLE NO.

BPD33

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10A

Sample wt/vol: 5.2 (g/mL) G Lab File ID: BPD33

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 30 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
74-87-3	Chloromethane	14	UJ
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	14.8	BOUJ
67-64-1	Acetone	14.2	BOUJ
75-15-0	Carbon Disulfide	14.0.2	BOUJ
75-35-4	1,1-Dichloroethene	14	UJ
75-34-3	1,1-Dichloroethane	14	UJ
540-59-0	1,2-Dichloroethene (total)	4	J
67-66-3	Chloroform	14	UJ
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14.8	BOUJ
124-48-1	Dibromochloromethane	14	UJ
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (total)	14	U

000148

EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPD33

Lab Name: RASI Contract: 6S-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10ASample wt/vol: 5.2 (g/mL) G Lab File ID: BPD33Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. 30 Date Analyzed: 06/25/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-8 124-33-1	METHANE, TETRANITRO- <i>Carbon Disulfide</i>	3.33	390	NR

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000801

BPD33

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: BPD33

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 30 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2-----	Phenol	470	U
111-44-4-----	bis(2-Chloroethyl) Ether	470	U
95-57-8-----	2-Chlorophenol	470	U
541-73-1-----	1,3-Dichlorobenzene	470	U
106-46-7-----	1,4-Dichlorobenzene	470	U
95-50-1-----	1,2-Dichlorobenzene	470	U
95-48-7-----	2-Methylphenol	470	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	470	U
106-44-5-----	4-Methylphenol	470	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	470	U
67-72-1-----	Hexachloroethane	470	U
98-95-3-----	Nitrobenzene	470	U
78-59-1-----	Isophorone	470	U
88-75-5-----	2-Nitrophenol	470	U
105-67-9-----	2,4-Dimethylphenol	470	U
111-91-1-----	bis(2-Chloroethoxy) Methane	470	U
120-83-2-----	2,4-Dichlorophenol	470	U
120-82-1-----	1,2,4-Trichlorobenzene	470	U
91-20-3-----	Naphthalene	35	J
106-47-8-----	4-Chloroaniline	470	U
87-68-3-----	Hexachlorobutadiene	470	U
59-50-7-----	4-Chloro-3-Methylphenol	470	U
91-57-6-----	2-Methylnaphthalene	43	J
77-47-4-----	Hexachlorocyclopentadiene	470	U
88-06-2-----	2,4,6-Trichlorophenol	470	U
95-95-4-----	2,4,5-Trichlorophenol	1100	U
91-58-7-----	2-Chloronaphthalene	470	U
88-74-4-----	2-Nitroaniline	1100	U
131-11-3-----	Dimethylphthalate	32	J
208-96-8-----	Acenaphthylene	470	U
606-20-2-----	2,6-Dinitrotoluene	470	U
99-09-2-----	3-Nitroaniline	1100	U
83-32-9-----	Acenaphthene	27	J

IC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000802

BPD33

Lab Name: RASI Contract: 68-D2-0014
 Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
 Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10B
 Sample wt/vol: 30.3 (g/mL) G Lab File ID: BPD33
 Level: (low/med) LOW Date Received: 06/09/94
 % Moisture: 30 decanted: (Y/N) N Date Extracted: 06/13/94
 Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 7.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
51-28-5-----	2,4-Dinitrophenol	1100	UJ
100-02-7-----	4-Nitrophenol	1100	U
132-64-9-----	Dibenzofuran	24	J
121-14-2-----	2,4-Dinitrotoluene	470	U
84-66-2-----	Diethylphthalate	470	U
7005-72-3-----	4-Chlorophenyl-phenylether	470	U
86-73-7-----	Fluorene	470	U
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-Nitrosodiphenylamine (1)	470	U
101-55-3-----	4-Bromophenyl-phenylether	470	U
118-74-1-----	Hexachlorobenzene	470	U
87-86-5-----	Pentachlorophenol	1100	U
85-01-8-----	Phenanthrene	300	J
120-12-7-----	Anthracene	46	J
86-74-8-----	Carbazole	35	J
84-74-2-----	Di-n-Butylphthalate	120	J
206-44-0-----	Fluoranthene	630	
129-00-0-----	Pyrene	430	J
55-68-7-----	Butylbenzylphthalate	1100	
91-94-1-----	3,3'-Dichlorobenzidine	470	U
56-55-3-----	Benzo(a)Anthracene	260	J
218-01-9-----	Chrysene	370	J
117-81-7-----	bis(2-Ethylhexyl) Phthalate	9,470 6500	B
117-84-0-----	Di-n-Octyl Phthalate	690	
205-99-2-----	Benzo(b)Fluoranthene	400	J
207-08-9-----	Benzo(k)Fluoranthene	190	J
50-32-8-----	Benzo(a)Pyrene	280	J
193-39-5-----	Indeno(1,2,3-cd)Pyrene	470	U
53-70-3-----	Dibenz(a,h)Anthracene	470	U
191-24-2-----	Benzo(g,h,i)Perylene	470	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000803

BPD33

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: BPD33

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 30 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC-ACID, PENTYL-ESTER	6.08	35000	JN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.50	49000	BONA
3.	UNKNOWN	33.77	670	J
4.	UNKNOWN	33.90	610	J
5.	UNKNOWN	33.97	1500	J
6.	UNKNOWN	34.12	850	J
7.	UNKNOWN	34.18	150	J
8.	UNKNOWN	35.03	180	J
9.	UNKNOWN	35.23	340	J
10.	UNKNOWN	35.37	250	J
11.	UNKNOWN	35.93	1100	J
12.	UNKNOWN	36.07	230	J
13.	UNKNOWN	36.30	700	J
14.	UNKNOWN	36.57	120	J
15.	UNKNOWN	37.03	120	J
16.	UNKNOWN	37.25	220	J
17.	UNKNOWN	37.42	570	J
18.	UNKNOWN	37.60	420	J
19.	UNKNOWN	38.48	770	J
20.	UNKNOWN	38.58	1100	J
21.	UNKNOWN	39.07	980	J ✓

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001373

BPD33

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: J0630B16

% Moisture: 30. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 07/01/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	2.4	U
319-85-7-----	beta-BHC	2.4	U
319-86-8-----	delta-BHC	2.4	U
58-89-9-----	gamma-BHC [Lindane]	2.4	U
76-44-8-----	Heptachlor	2.4	U
309-00-2-----	Aldrin	2.4	U
1024-57-3-----	Heptachlor Epoxide	2.4	U
959-98-8-----	Endosulfan I	2.4	U
60-57-1-----	Dieldrin	4.7	U
72-55-9-----	4,4'-DDE	4.7	U
72-20-8-----	Endrin	4.7	U
33213-65-9-----	Endosulfan II	4.7	U
72-54-8-----	4,4'-DDD	4.7	U
1031-07-8-----	Endosulfan Sulfate	4.7	U
50-29-3-----	4,4'-DDT	4.7	U
72-43-5-----	Methoxychlor	24.	U
53494-70-5-----	Endrin Ketone	4.7	U
7421-93-4-----	Endrin Aldehyde	4.7	U
5103-71-9-----	alpha-Chlordane	2.4	U
5103-74-2-----	gamma-Chlordane	2.4	U
8001-35-2-----	Toxaphene	240.	U
12674-11-2-----	Aroclor-1016	47.	U
11104-28-2-----	Aroclor-1221	96.	U
11141-16-5-----	Aroclor-1232	47.	U
53469-21-9-----	Aroclor-1242	47.	U
12672-29-6-----	Aroclor-1248	47.	U
11097-69-1-----	Aroclor-1254	4500.	U
11096-82-5-----	Aroclor-1260	47.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000158
EPA SAMPLE NO.

BPG07

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPG07

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 46 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	-----Chloromethane	19	UJ
74-83-9	-----Bromomethane	19	U
75-01-4	-----Vinyl Chloride	19	U
75-00-3	-----Chloroethane	19	UV
75-09-2	-----Methylene Chloride	19	BJ UJ
67-64-1	-----Acetone	19	BJ UJ
75-15-0	-----Carbon Disulfide	19	UJ
75-35-4	-----1,1-Dichloroethene	19	UJ
75-34-3	-----1,1-Dichloroethane	19	UJ
540-59-0	-----1,2-Dichloroethene (total)	4	J
67-66-3	-----Chloroform	19	UJ
107-06-2	-----1,2-Dichloroethane	19	U
78-93-3	-----2-Butanone	19	U
71-55-6	-----1,1,1-Trichloroethane	19	U
56-23-5	-----Carbon Tetrachloride	19	U
75-27-4	-----Bromodichloromethane	19	U
78-87-5	-----1,2-Dichloropropane	19	U
10061-01-5	-----cis-1,3-Dichloropropene	19	UV
79-01-6	-----Trichloroethene	19	BJ UJ
124-48-1	-----Dibromochloromethane	19	UJ
79-00-5	-----1,1,2-Trichloroethane	19	U
71-43-2	-----Benzene	19	U
10061-02-6	-----trans-1,3-Dichloropropene	19	U
75-25-2	-----Bromoform	19	U
108-10-1	-----4-Methyl-2-Pentanone	19	U
591-78-6	-----2-Hexanone	19	U
127-18-4	-----Tetrachloroethene	19	U
79-34-5	-----1,1,2,2-Tetrachloroethane	19	U
108-88-3	-----Toluene	19	U
108-90-7	-----Chlorobenzene	19	U
100-41-4	-----Ethylbenzene	19	U
100-42-5	-----Styrene	19	U
1330-20-7	-----Xylene (total)	19	UV

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000159
EPA SAMPLE NO.

BPG07

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BPG07

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. 46 Date Analyzed: 06/25/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 509-14-0	METHANE, TETRANITRO-	3.32	1300	JN K
2. 541-02-6	CYCLOPENTASILOXANE, DECAMETH	27.32	30	JN

IB
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000555

BPG07

Lab Name: RASI Contract: 68-D2-0014
 Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
 Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11B
 Sample wt/vol: 30.1 (g/mL) G Lab File ID: BPG07
 Level: (low/med) LOW Date Received: 06/09/94
 % Moisture: 46 decanted: (Y/N) N Date Extracted: 06/13/94
 Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
108-95-2	Phenol	610	U
111-44-4	bis(2-Chloroethyl) Ether	610	U
95-57-8	2-Chlorophenol	610	U
541-73-1	1,3-Dichlorobenzene	610	U
106-46-7	1,4-Dichlorobenzene	610	U
95-50-1	1,2-Dichlorobenzene	610	U
95-48-7	2-Methylphenol	610	U
108-60-1	2,2'-oxybis(1-Chloropropane)	610	U
106-44-5	4-Methylphenol	610	U
621-64-7	N-Nitroso-Di-n-Propylamine	610	U
67-72-1	Hexachloroethane	610	U
98-95-3	Nitrobenzene	610	U
78-59-1	Isophorone	610	U
88-75-5	2-Nitrophenol	610	U
105-67-9	2,4-Dimethylphenol	610	U
111-91-1	bis(2-Chloroethoxy) Methane	610	U
120-83-2	2,4-Dichlorophenol	610	U
120-82-1	1,2,4-Trichlorobenzene	63	J
91-20-3	Naphthalene	480	J
106-47-8	4-Chloroaniline	610	U
87-68-3	Hexachlorobutadiene	610	U
59-50-7	4-Chloro-3-Methylphenol	610	U
91-57-6	2-Methylnaphthalene	450	J
77-47-4	Hexachlorocyclopentadiene	610	U
88-06-2	2,4,6-Trichlorophenol	610	U
95-95-4	2,4,5-Trichlorophenol	1500	U
91-58-7	2-Chloronaphthalene	610	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	610	U
208-96-8	Acenaphthylene	220	J
606-20-2	2,6-Dinitrotoluene	610	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	830	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000886

BPG07

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: BPG07

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: 46 decanted: (Y/N) N Date Extracted: 06/13/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
51-28-5-----	2,4-Dinitrophenol	1500	U J
100-02-7-----	4-Nitrophenol	1500	U
132-64-9-----	Dibenzofuran	380	J
121-14-2-----	2,4-Dinitrotoluene	610	U
84-66-2-----	Diethylphthalate	610	U
7005-72-3-----	4-Chlorophenyl-phenylether	610	U
86-73-7-----	Fluorene	540	J
100-01-6-----	4-Nitroaniline	1500	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1500	U
86-30-6-----	N-Nitrosodiphenylamine (1)	610	U
101-55-3-----	4-Bromophenyl-phenylether	610	U
118-74-1-----	Hexachlorobenzene	610	U
87-86-5-----	Pentachlorophenol	1500	U
85-01-8-----	Phenanthrene	4000	
120-12-7-----	Anthracene	830	
86-74-8-----	Carbazole	650	
84-74-2-----	Di-n-Butylphthalate	610	U
206-44-0-----	Fluoranthene	7,700 8200	E
129-00-0-----	Pyrene	6,000 6600	E
85-68-7-----	Butylbenzylphthalate	2000	
91-94-1-----	3,3'-Dichlorobenzidine	610	U
56-55-3-----	Benzo(a)Anthracene	4,000 5300	E
218-01-9-----	Chrysene	5,100 5900	E
117-81-7-----	bis(2-Ethylhexyl) Phthalate	22,000 22000	E
117-84-0-----	Di-n-Octyl Phthalate	1100	
205-99-2-----	Benzo(b) Fluoranthene	920 9900	E
207-08-9-----	Benzo(k) Fluoranthene	4600	
50-32-8-----	Benzo(a) Pyrene	5,900 6400	E
193-39-5-----	Indeno(1,2,3-cd) Pyrene	4,700 6200	E
53-70-3-----	Dibenz(a,h)Anthracene	2200	
191-24-2-----	Benzo(g,h,i) Perylene	4500	

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000887

BPG07

Lab Name: RASI Contract: 68-D2-0014
Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD08
Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11B
Sample wt/vol: 30.1 (g/mL) G Lab File ID: BPG07
Level: (low/med) LOW Date Received: 06/09/94
% Moisture: 46 decanted: (Y/N) N Date Extracted: 06/13/94
Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 07/12/94
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 21 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 628-63-7	ACETIC ACID, PENTYL ESTER	6.03	76000	JN
2. 123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	7.47	89000	BNA-1
3.	UNKNOWN	34.10	2100	J ✓
4.	UNKNOWN	34.97	210	J
5.	UNKNOWN	35.03	570	J
6.	UNKNOWN	35.13	480	J
7.	UNKNOWN	35.20	930	J
8.	UNKNOWN	35.23	1400	J
9.	UNKNOWN	35.37	770	J
10.	UNKNOWN	35.47	530	J
11.	UNKNOWN	35.58	290	J
12.	UNKNOWN	35.68	1600	J
13.	UNKNOWN	35.85	1000	J
14.	UNKNOWN	35.93	3300	J
15.	UNKNOWN	36.02	420	J
16.	UNKNOWN	36.15	440	J
17.	UNKNOWN	36.20	740	J
18.	UNKNOWN	36.25	370	J
19.	UNKNOWN	36.30	3200	J
20.	UNKNOWN	38.63	4400	J ✓
21. 205-82-3	BENZO [J] FLUORANTHENE	39.45	6100	JN

(93)

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
001300

BPG07

Lab Name: Ross Analytical Services Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: SDG No.: BPD08

Matrix: (soil/water) SOIL Lab Sample ID: 94-06-124-11

Sample wt/vol: 30.3 (g/mL) G Lab File ID: J0629B15

% Moisture: 46. decanted: (Y/N) N Date Received: 06/09/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 06/13/94

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 06/30/94

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	31.	U
319-85-7-----	beta-BHC	31.	U
319-86-8-----	delta-BHC	31.	U
58-89-9-----	gamma-BHC [Lindane]	31.	U
76-44-8-----	Heptachlor	31.	U
309-00-2-----	Aldrin	31.	U
1024-57-3-----	Heptachlor Epoxide	31.	U
959-98-8-----	Endosulfan I	31.	U
60-57-1-----	Dieldrin	61.	U
72-55-9-----	4,4'-DDE	61.	U
72-20-8-----	Endrin	61.	U
33213-65-9-----	Endosulfan II	61.	U
72-54-8-----	4,4'-DDD	61.	U
1031-07-8-----	Endosulfan Sulfate	61.	U
50-29-3-----	4,4'-DDT	61.	U
72-43-5-----	Methoxychlor	310.	U
53494-70-5-----	Endrin Ketone	61.	U
7421-93-4-----	Endrin Aldehyde	61.	U
5103-71-9-----	alpha-Chlordane	31.	U
5103-74-2-----	gamma-Chlordane	31.	U
8001-35-2-----	Toxaphene	3100.	U
12674-11-2-----	Aroclor-1016	610.	U
11104-28-2-----	Aroclor-1221	1200.	U
11141-16-5-----	Aroclor-1232	610.	U
53469-21-9-----	Aroclor-1242	610.	U
12672-29-6-----	Aroclor-1248	610.	U
11097-69-1-----	Aroclor-1254	51.00 50000.	U
11096-82-5-----	Aroclor-1260	610.	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

000066
EPA SAMPLE NO.

BPF99

Lab Name: RASI Contract: 68-D2-0014

Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27

Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: BPF99

Level: (low/med) LOW Date Received: 06/09/94

% Moisture: not dec. _____ Date Analyzed: 06/17/94

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	7	J
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (total)	10	U

000067

EPA SAMPLE NO.

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BPF99

Lab Name: RASI Contract: 68-D2-0014Lab Code: ROSS Case No.: 22276 SAS No.: _____ SDG No.: BPD27Matrix: (soil/water) WATER Lab Sample ID: 94-06-123-07ASample wt/vol: 5.0 (g/mL) ML Lab File ID: BPF99Level: (low/med) LOW Date Received: 06/09/94% Moisture: not dec. _____ Date Analyzed: 06/17/94GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

RECORD OF COMMUNICATION REGIONAL SAMPLE CONTROL CENTER

DATE: 7/20/94
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: RSCC/ESAT
TO: George Karras,
Toxic and Hazardous Waste Section

***Attached is the following INORGANIC Data Package
to be reviewed for Quality Assurance***

<u>SITE</u>	<u>CASE/SAS#</u>	<u>LAB</u>	<u>MATRIX</u>	<u># SAMPLES</u>
CORNELL DUBILIER ELECTRONICS APER/SI	22276	ITPA	SOIL	11
			WATER	7

REGION II RSCC DATA TRANSFER LOG

Relinquished By

Received By

Signature	Date/Time
Harry J. Hannel III	7/19/94
John Bulech	7/20/94
CMAA DCR (K)	7/25/94
CMAA	8/8/94
DCR	8/9/94 9:45
Henry Shick	8/15/94 2:30
Harry J. Hannel III	7/14/94
John Bulech	7/19/94
CMAA DCR	7/25/94
CMAA	7/35/94
DCR Horn	8/8/94
Henry Shick	8/9/94 9:45
DCR	8/15/94 2:30

(OVER FOR INSTRUCTIONS) revs

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STANDARD OPERATING PROCEDURE

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Jan. 1992
Number: HW-2
Revision: 11

Case# 22276 Site Cornell Dublier Matrix: Soil 11
SDG# MBLF01/MBLF28 Lab ITPA Water 7
Contractor APER Reviewer C.M. Alaimo/ESAT Other _____

A.2.1. Validation flags-

The following flags have been applied in red by the data validator and must be considered by the data user.

J- This flag indicates the result qualified as estimated.

Red-Line- A red-line drawn through a sample result indicates unusable value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user.

Fully Usable Data - The results that do not carry "J" or "red-line" are fully usable.

Contractual Qualifiers- The legend of contractual qualifiers applied by the lab on Form I's is found on page B-20 of SOW ILM01.0

A.2.2. The data assessment is given below and on the attached sheets.

This package consisted of seven water and eleven soil samples collected on 6/08/94 at the Cornell Dublier site. According to the trip report, two field blanks were taken: MBLF35 (scoopula & bowl) and MBLF36 (trowel). Both field blanks were associated with the following samples: MBLF01, MBLF25-->27, MBLF32-->34, MBLF38, MBLF81-->83. Two field duplicate pairs were analyzed: for soils- MBLF25/MBLF27 and for waters- MBLF30/MBLF31. The QC for both field duplicate pairs was acceptable.

CRDL STANDARDS: BOTH SDGs

For SDG# MBLF01, the third CRI for Se was 72.1%, therefore all associated results within the affected range were estimated. In SDG# MBLF28, both the initial CRIs of As and Cd were >120% but <150%, therefore all positive associated results within the affected range were estimated. In addition, the initial CRI for Se fell between 50-79%, requiring estimation.

J--->Se in MBLF34, MBLF38, MBLF81-->83
J--->Se, As & Cd in MBLF28 & MBLF29.

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Jan. 1992
Number: HW-2
Revision: 11

A.2.2. (continuation)

MATRIX SPIKE: SDG# MBLF01

The % recovery for Sb fell between 10-74%, all associated data was estimated. For Cu, the % recovery fell between 126-200%, therefore all positive associated results were estimated.

J--->Sb & Cu in MBLF01, MBLF25-->27, MBLF32-->34, MBLF38, MBLF81-->83.

ICP SERIAL DILUTION: SDG# MBLF01

For Co and Ni, the %D was >10% but <100% and each had an initial result $\geq 10 \times \text{IDL}$, therefore all associated results $\geq 10 \times \text{IDL}$ or $\geq \text{CRDL}$ when $10 \times \text{IDL} \leq \text{CRDL}$ were estimated.

J--->Co in MBLF01 & MBLF34

J--->Ni in MBLF01, MBLF25, MBLF27, MBLF32-->34, MBLF38, MBLF81-->83.

% TOTAL SOLIDS: SDG# MBLF01

The % total solid for sample MBLF33 was <50% but >10%, therefore all analytes not previously qualified were estimated.

J---> all analytes not previously qualified were estimated in MBLF33

FIELD BLANK CONTAMINATION:

Both field blanks had Zn results > CRDL: MBLF35-143 ug/L, and MBLF36-97.5 ug/L. All associated positive data $\leq 5 \times$ field blank value were rejected.

R--->Zn in MBLF26, MBLF81 & MBLF82.

STANDARD OPERATING PROCEDURE

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Jan. 1992
Number: HW-2
Revision: 11

A.2.2. (continuation)

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Jan. 1992
Number: HW-2
Revision: 11

8/15/94 HS

A.2.3. Contract-Problems/Non-Compliance

NONE.

MMB Reviewer: _____

Signature

Date: _____

Contractor Reviewer: _____

CMA

Signature

Date: 8/8/94

Verified by: _____

Signature

Date: _____

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.3: Contract Non-Compliance
(SMD Report)

Date: Jan. 1992
Number: HW-2
Revision: 11

CONTRACT NON-COMPLIANCE
(SMD REPORT)

Regional Review of Uncontrolled Hazardous Waste
Site Contract Laboratory Data Package

CASE NO. 22276

The hardcopied (laboratory name) IT PA

Inorganic data package received at Region II has been reviewed and the quality assurance and performance data summarized. The data reviewed included:

SMD Sample No.: _____

Conc. & Matrix: _____

Contract No. (14702.1) requires that specific analytical work be done and that associated reports be provided by the contractor to the Regions, EMSL-LV, and SMD. The general criteria used to determine the performance were based on an examination of:

- | | |
|---------------------------------|------------------------------|
| - Data Completeness | - Duplicate Analysis Results |
| - Matrix Spike Results | - Blank Analysis Results |
| - Calibration Standards Results | - MSA Results |

Items of non-compliance with the above contract are described below.

Comments: NONE

CMA
Reviewer's Initial

1/8/94
Date

TUe: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.4: Mailing List for Data Reviewers

Date: Jan. 1992
Number HW-2
Revision: 11

DFO MAILING LIST FOR DATA REVIEWERS

1. USEPA Region I (ESD)
60 Westview Street
Lexington, MA 02173
Deb Szaro
(617) 861-4312
CT, ME, MA, NH, RI, VT
CAA, Resource Analysts, York,
ESI, Sidnoer, TMA
2. USEPA Region II ESD
Woodbridge Avenue
Edison, NJ 08837
Usa Gattoe Vidulich
(201) 321-6676
NJ, NY, PR, VI
Century, Chemtech, US Test, Naaco
ETC, Cadsoo, EMS, Gilroo, ICM
3. USEPA Region III (CRL)
839 Bestgate Road
Annapolis, MD 21401
Chuck Sands
(301) 266-9180
DE, MD, PA, VA, WV, DC
Ceatec, Hitman, JTC, MACK, VERSAR,
ITAS, Wectoo, MMES, EA Engineering,
Subject Tecir, KEYPA
4. USEPA Region IV (ESD)
Analytical Support Branch
College Station Road
Athens, GA 30613
Tom Bennett, Jr.
(404) 546-3112
AL, FL, GA, KY, MS, NC, SC, TN
CorapuChem, EPS, ESE, PBSAJ,
Triangle Labs
5. USEPA Region V (ESD)
536 South Clark Street
Tenth Floor, CRL
Chicago, IL 60605
Pat Churilla
(312) 353-9087
IL, IN, MI, MN, OH, WI
NLB, TAI/ENO
6. USEPA Region VI (ESD)
Monterey Park Plaza, Bldg. C
6608 Horawood Drive
Houston, TX 77074
David Stockton
(713) 953-3425
AR, LA, NM, TX, OK
ANAOON, RADIANT, SPECS, EIS, Glochem
Research, Inc., SPL Inc., SWRL
Allied, KEYTX, EIRA
7. USEPA Region VII Laboratory
25 Funston Road
Kansas City, KS 66115
Debra Morey
(913) 236-3881
IO, KS, NB, MO
Wilbo, Kansas City Scientific
Enterprises, Eagle Picher
8. USEPA Region VIII Laboratory
Box 25366
Denver Federal Center
Lakewood, CO 80225
Eva Hoffmaa
(303) 236-7371
CO, ND, SD, UT, WV, MT
ACCU, CSMRL RML, Data Chem., Cearef
9. USEPA Region XI (ESD)
QA Management Section
215 Fremont Street
San Francisco, CA 94105
Kent Kitchingman
(415) 974-6924
AZ, CA, HI, NV, American Samoa,
Guam Trust Territories of Pacific
Islands, Wake Island
A12, CAL Westco, S-Cubed, TT_CA,
Vegas
10. USEPA Region X Laboratory
P.O. Box 549
Manchester, WA 98353
Cerald Muth
(206) 442-0370
AK, ID, OR, WA
Laucks Testing Labs, Century Testing
Labs (For VOA Only), Weyerhaeuser Co.,
Columbia Testing, Silver Valley
11. Carla Dempsey - (OS-230)
USEPA
401 "M" Street S.W.
Washington, DC 20460
PTS 382-5746
12. Edward Kaator
USEPA
EMSL-LV
944 E. Hannon Avenue
Box 93478
Las Vegas, NV 89119
13. Sample Management Office
Vlar and Company
P.O. Box 818
Alexandria, VA 22313

STANDARD OPERATING PROCEDURE

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.6: CLP Data Assessment
Summary Form (Inorganics)

Date: Feb. 1990
Number: HW-2
Revision: 10

CLP DATA ASSESSMENT SUMMARY FORM (INORGANICS)

Type of Review: RAS Date: 8/8/94 Case #: 22276
Site: Cornwall Dublier Lab Name: ITPA
Reviewer's Initials: CHA Number of Samples: 7 water / 11 soil

Analytes Rejected Due to Exceeding Review Criteria:

	Holding Time	Calibrator	Prep Blank	Field Blank	Inter- ferences	Spike Recovery	Duplicate Lab/Field	C.R. Detection Limit	LCS	Serial Dilution	NSA	Total Analytes	Rejection
ICP				3								396	3
Flame AA												0	
Furnace AA												0	
Mercury												18	
Total				3								414	3
Other												0	

Analytes Flagged as Estimated (J) Due to Exceeding Criteria For:

9.75

ICP	19					22		11		12		396	64
Flame AA												0	
Furnace AA												0	
Mercury	1											18	1
Total	20					22		11		12		414	-63
Other													

Note:

Amended (0) Indicates additional exceedances of review criteria.

STANDARD OPERATING PROCEDURE

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.6: CLP Data Assessment Checklist

Date: Jan. 1992
Number: HW-2
Revision: 11

Inorganic Analysis

INORGANIC REGIONAL DATA ASSESSMENT

Region ITCASE NO. 22276SITE Cornel DolierLABORATORY ITPA

NO. OF SAMPLES/

MATRIX 7 water / 11 soilSOG# MDLF01 / MDLF28

REVIEWER (IF NOT ESD) _____

SOW# ILN02.1REVIEWER'S NAME C.M. Alaimo

DPO: ACTION _____ FYI _____

COMPLETION DATE 8/8/94

DATA ASSESSMENT SUMMARY

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O	N/A	O	N/A
2. CALIBRATIONS	O			
3. BLANKS	O-M			
4. ICS	O			
5. LCS	O			
6. DUPLICATE ANALYSIS	O			
7. MATRIX SPIKE	O-M			
8. MSA				
9. SERIAL DILUTION	O-M			
10. SAMPLE VERIFICATION	O			
11. OTHER QC	O			
12. OVERALL ASSESSMENT	O			

O = Data has no problems/or qualified due to minor problems.

M = Data qualified due to major problems.

Z = Data unacceptable.

X = Problems, but do not affect data.

ACTION ITEMS: _____

AREAS OF CONCERN: _____

NOTABLE PERFORMANCE: _____

U.S. EPA - CLP

6
FIELD DUPLICATES

EPA SAMPLE NO.

MBLF 30 MBLF 31

Lab Name: IT Analytical ServicesContract: LPD 20041Lab Cods: ITPA Case No.: 22276

SAS No.: _____

SDG No.: MBLF 28Matrix (soil/water): waterLevel (low/med): low% Solids Sample: 0% Solids Duplicate: 0

Concentration Units (ug/L or mg/kg dry weight):

Analyte	Action Limit	Sample (S) Concentration	C	Field Duplicate (D) Concentration	C	RPD	DIFF	Q	M
Aluminum	200	401.0000		373.0000			28		P
Antimony		13.2000	u	13.2000	u	—	—		P
Arsenic	10	3.9000	B	4.4000	B		0.7		F
Barium	200	114.0000	B	117.0000	B		3		P
Beryllium	5	0.2000	B	0.1600	B		0.04		P
Cadmium		2.6000	u	2.6000	u	—	—		P
Calcium	50%	46106.0000		47400.0000		2.8			P
Chromium		1.5000	u	1.5000	u	—	—		P
Cobalt	50	2.6000	B	2.2000	B		0.4		P
Copper	25	7.2000	B	7.6000	B		0.4		F
Iron	50%	1470.0000		1500.0000		2.0			P
Lead	3	5.8000		4.6000			1.2		P
Magnesium	5000	8840.0000		9050.0000			210		P
Manganese	50%	409.0000		416.0000		1.7			P
Mercury		0.2000	u	0.2000	u	—	—		CV
Nickel	40	9.3000	B	8.9000	B		0.4		P
Potassium	5000	2500.0000	B	2580.0000	B		80		P
Selenium		3.0000	u	3.0000	u	—	—		F
Silver		1.9000	u	1.9000	u	—	—		P
Sodium	5000	24400.0000		25100.0000			700		P
Thallium		3.7000	u	3.7000	u	—	—		F
Vanadium	50	4.8000	B	4.0000	B		0.8		P
Zinc	20	62.1000		51.8000					P
Cyanide									NR

FORM VI - IN

CMA 8/4/94
no Action required

U.S. EPA - CLP

6
FIELD DUPLICATES

EPA SAMPLE NO.

MBLF25 MBLF 27

Lab Name: IT Analytical ServicesContract 68D2004Lab Code: ITPACase No.: 22276

SAS No.: _____

SDG No.: MBLF01Matrix (soil/water): SoilLevel (low/med): low% Solids Sample: 87.1% Solids Duplicate: 87.2

Concentration Units (ug/L or mg/kg dry weight):

Analyte	Action Limit	Sample (S) Concentration	C	Field Duplicate (D) Concentration	C	RPD	DIFF	Q	M
Aluminum	100%	28800		29100.0000		1.0			P
Antimony	27.5	25.40		16.8000			8.6		P
Arsenic	4.6	6.500		5.2000			1.3		F
Barium	91.8	224.0		255.0000			31		P
Beryllium	2.3	0.5000	B	0.5400	B		0.04		P
Cadmium	100%	33.2000		36.7000		10.0			P
Calcium	2296	4700.0000		6590.0000			1890		P
Chromium	100%	25.7000		24.5000		4.8			P
Cobalt	22.9	9.2000	B	10.0000	B		0.8		P
Copper	100%	3020.0000		1310.0000		78.9			F
Iron	100%	28400.0000		26100.0000		8.4			P
Lead	100%	2200.0000		1990.0000		10.0			P
Magnesium	2296	3190.0000		4050.0000			860		P
Manganese	100%	360.0000		462.0000		24.8			P
Mercury	100%	0.4700		0.7600		47.1			CV
Nickel	18.4	31.4000		31.4000		—	—		P
Potassium	2296	1320.0000		1410.0000			90		P
Selenium	2.3	1.0000	B	0.66.00	u		0.34		F
Silver	100%	26.7000		22.9000		15.3			P
Sodium	2296	156.0000	B	160.0000	B		4		P
Thallium		0.8200	u	0.8100	u	—	—		F
Vanadium	22.9	30.5000		30.2000			0.3		P
Zinc	100%	1380.0000		1040.0000		28.0			P
Cyanide									NR

FORM VI - IN

8/3/94 CNA

no action required

6
Lab DUPLICATES

EPA SAMPLE NO.

Lab Name: IT Analytical Services contract: 68-D2-0044

MBLF 83

Lab Code: ITPACase No.: 22276

SAS No.: _____

SDC No.: MBLFO1Matrix (soil/water): SoilLevel (low/med): low* Solids for Sample: 60.2* Solids for Duplicate: 54.7Concentration Units (ug/L or ng/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RRD/ Δ	Q	M
Aluminum	1007-	23192.6078	-	23682.7530	-	2.17/	-	-
Antimony	120	12.9412	W	12.9412	W	-	-	-
Arsenic	20	38.8627	-	43.2254	-	4.3627	-	-
Barium	400	873.8530	-	909.6274	-	135.7744	-	-
Beryllium	10	1.5489	B	1.6570	B	10.1091	-	-
Cadmium	10	14.2451	-	14.6960	-	10.4509	-	-
Calcium	10,000	20964.4411	-	19984.5883	-	19998.525	-	-
Chromium	1007-	236.6275	-	232.0981	-	1.97/	-	-
Cobalt	100	45.4609	B	44.0980	B	11.3629	-	-
Copper	1007-	249.5687	-	264.1570	-	5.77/	-	-
Iron	1007-	108886.0589	-	118047.5784	-	8.17/	-	-
Lead	1007-	1262.2844	-	1100.2844	-	13.71/	-	-
Magnesium	10,000	9698.3040	-	9578.8536	-	119.4504	-	-
Manganese	1007-	1574.8726	-	1493.2450	-	5.37/	-	-
Mercury	1007-	8.8142	-	7.3950	-	17.57/	-	-
Nickel	80	95.3234	-	132.5881	-	137.2647	-	-
Potassium	10,000	4049.9511	B	4358.4312	B	1309.4801	-	-
Selenium	10	4.2354	B	6.8923	-	12.6569	-	-
Silver	20	11.4118	-	12.3922	-	10.9804	-	-
Sodium	10,000	644.5981	B	616.0293	B	129.5688	-	-
Thallium		3.6274	W	3.6274	W	-	-	-
Vanadium	100	170.5881	-	183.9215	-	113.3334	-	-
Zinc	1007-	954.0686	-	1130.2941	-	16.97/	-	-
Cyanide								

CMA 8/8/94

no Action required

SDG# MBLF01

MBLF28

Case# 22276

Evaluation of Metals Data for the Contract Laboratory Program (CLP)

based on

SOW. 3/90

(SOP Revision XI)

PREPARED BY:

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DATE:

1-30-92

Hanif Sheikh, Quality Assurance Chemist
Toxic and Hazardous Waste Section

APPROVED BY:

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DATE:

1-30-92

Kevin Kubik, Chief
Toxic and Hazardous Waste Section

APPROVED BY:

Robert Runyon

DATE:

1/31/92

Robert Runyon, Chief
Monitoring Management Branch

Title: Evaluation of Metals Data for the
Contract Laboratory Program

Date: Jan. 1992
Number: HW-2
Revision: 11

1.0 Scope

- 1.1 This procedure is applicable to inorganic data obtained from contractor laboratories working for Hazardous Waste Site Contract Laboratory Program (CLP).
- 1.2 The data validation is based upon analytical and quality assurance requirements specified in Statement of Work (SCW) 3/90.
- 2.0 Responsibilities - Data reviewers will complete the following tasks as assigned by the Data Review Coordinator:
 - 2.1. For a total review:
 - 2.1.1 Data Assessment - "Total Review-Inorganica" Checklist Appendix (A.1).
The reviewer must answer every question on the checklist.
 - 2.1.2 Data Assessment - Data Assessment Narrative (Appendix A.2)
The answer on the checklist must match the action in the narrative (appendix A.2) and on Form I's. Do not use pencil to write the narrative.
 - 2.1.3 Contract Non-Compliance - SMD Report (Appendix A.3)
This report is to be completed only when a serious contract violation is encountered, or upon the request of the Data Validation Task Monitor, or Technical Project Officer (TPO). Forward 5 copies: one each for internal files, appropriate Regional TPO, Sample Management Office (SMO) and last two addresses of Mailing List for Data Reviewers (Appendix A.4). In other cases, all contract violations should be appended to the end of the Data Assessment Narrative (Sec. A.2.2).
 - 2.1.4 CLP Data Assessment Summary Forms
 - 2.1.4.1 Appendix A.5
Fill in the total number of analytes analyzed by different analyses and the number of analytes rejected or flagged as estimated due to corresponding quality control criteria. Place an "X" in boxes where analyses were not performed, or criteria do not apply.
 - 2.1.4.2 Appendix A.6
Data reviewer is also required to fill out Inorganic Regional Data Assessment form (Appendix A.7) provided by EPA Headquarters. Codes listed on the form will be used to describe the Data Assessment Summary.

Title: Evaluation of Metals Data for the
Contract Laboratory Program

Date: Jan. 1992
Number: HW-2
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2.1.5 Data Review Log: It is recommended that each data reviewer should maintain a log of the reviews completed to include: a. date of start of case review

- b. date of completion of case review
- c. site
- d. case number
- e. contract laboratory
- f. number of samples
- g. matrix
- h. hours worked
- i. reviewer's initials

2.1.6 Telephone Record Log - the data reviewer should enter the bare facts of inquiry, before initiating any phone conversation with CLP laboratory. After the case review has been completed, mail white copy of Telephone Record Log to the laboratory and pink copy to SMO. File yellow copy in the Telephone Record Log folder, and attach a xerox copy of the Telephone Record Log to the completed Data Assessment Narrative (Appendix A.2).

2.1.7 Forwarded Paperwork

- 2.1.7.1 Upon completion of review, the following are to be forwarded to the Regional Sample Control Center (RSCC) located in the Surveillance and Monitoring Branch:
- a. data package
 - b. completed data assessment checklist (Appendix A.1, original)
 - c. SMO Contract Compliance Screening (OCS)
 - d. Record of Communication (copy)
 - e. CLP Reanalysis Request/Approval Record (original + 3 copies)
 - f. Appendix A.6 (original).
- 2.1.7.2 Forward 2 copies of completed Data Assessment Narrative (Appendix A.2) along with 2 copies of the Inorganic Data Assessment Form (Appendix A.6) and Telephone Record Log, if any, : one each for appropriate Regional TPO, and the other one to EPA EMSL office in Las Vegas. The addresses of TPOs and EPA office in Las Vegas are given in Appendix A-4.
- 2.1.8 Filed Paperwork - Upon completion of review, the following are to be filed within MMB files:
- a. Two copies of completed Data Assessment Narrative (Appendix A.2) each carrying Appendix A.6.
 - b. Telephone Record Log (copy)
 - c. SMD Report (copy Appendix A-3)
 - d. CLP Reanalysis Request/Approval Record (copy)

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
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	YES	ND	N/A
A.1.1 <u>Contract Compliance Screening Report (CCS)</u> - Present?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no, contact RSCC.			
A.1.2 <u>Record of Communication (from RSCC)</u> - Present?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no, request from RSCC.			
A.1.3 <u>Trip Report</u> - Present and complete?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no, contact RSCC for trip report.			
A.1.4 <u>Sample Traffic Report</u> - Present?	<input checked="" type="checkbox"/>	—	—
Legible?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no, request from Regional Sample Control Center (RSCC).			
A.1.5 <u>Cover Page</u> - Present?	<input checked="" type="checkbox"/>	—	—
Is cover page properly filled in and signed by the lab manager or the manager's designee?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no, prepare Telephone Record Log, and contact laboratory.			
Do numbers of samples correspond to numbers on Record of Communication?	<input checked="" type="checkbox"/>	—	—
Do sample numbers on cover page agree with sample numbers on:			
(a) Traffic Report Sheet?	<input checked="" type="checkbox"/>	—	—
(b) Form I's?	<input checked="" type="checkbox"/>	—	—
<u>ACTION</u> : If no for any of the above, contact RSCC for clarification.			

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Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
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A.1.6 Form I to IX Yes No N/A

A.1.6.1 Are all the Form I through Form IX labeled with:

Laboratory name?	<input checked="" type="checkbox"/>	—	—
Case/SAS number?	<input checked="" type="checkbox"/>	—	—
EPA sample No.?	<input checked="" type="checkbox"/>	—	—
SDG No.?	<input checked="" type="checkbox"/>	—	—
Contract No.?	<input checked="" type="checkbox"/>	—	—
Correct units?	<input checked="" type="checkbox"/>	—	—
Matrix?	<input checked="" type="checkbox"/>	—	—

ACTION: If no for any of the above, note under
Contract Problem/Non-Compliance section
of the "Data Assessment Narrative".

A.1.6.2 Do any computation/transcription errors exceed 10% of
reported values on Forms I-IX for:

(NOTE: Check all forms against raw data.)

(a) all analytes analyzed by ICP?	<input checked="" type="checkbox"/>	—	—
(b) all analytes analyzed by GFAA?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
(c) all analytes analyzed by AA Flame?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
(d) Mercury?	<input checked="" type="checkbox"/>	—	—
(e) Cyanide?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>

ACTION: If yes, prepare Telephone Log, contact
laboratory for corrected data and
correct errors with red pencil and initial.

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
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	YES	NO	N/A
A.1.7 <u>Raw Data</u>			
A.1.7.1 Digestion Log* for flame AA/ICP (Form XIII) present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digestion Log for furnace AA Form XIII present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distillation Log for mercury Form XIII present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distillation Log for cyanides Form XIII present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are pH values (pH<2 for all metals, pH>12 for cyanide) present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Weights, dilutions and volumes used to obtain values.			
Percent solids calculation present for soils/sediments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are preparation dates present on sample preparation logs/bench sheets?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.1.7.2 Measurement read out record present?			
ICP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flame AA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Furnace AA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyanides	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.7.3 Are all raw data to support all sample analyses and QC operations present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Properly Labeled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACTION: If no for any of the above questions in sections A.1.7.1 through A.1.7.3, write Telephone Record Log and contact laboratory for resubmittals.

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Title: Evaluation of Metals for the Contract
Laboratory Program
Appendix A.1: Data Assessment - Contract

Date: Jan. 1992
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Compliance (Total Review)

		YES	NO	N/A
A.1.8	<u>Holding Times</u> - (aqueous and soil samples) (Examine sample traffic reports and digestion/distillation logs.) Mercury analysis (28 days) exceeded? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Cyanide distillation (14 days) exceeded? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Other Metals analysis (6 months) exceeded? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> NOTE: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection to the date of preparation (from raw data). Attach to checklist. ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL) and flag as estimated (J) the values above IDL even though sample(s) was preserved properly.			
A.1.8.2	Is pH of aqueous samples for: Metals Analysis >2? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Cyanides Analysis <12? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Action: If yes, flag the associated metals and cyanides data as estimated.			
A.1.9	<u>Form I (Final Data)</u>			
A.1.9.1	Are all Form I's present and complete? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ACTION: If no, prepare telephone record log and contact laboratory for submittal.			
A.1.9.2	Are correct units (ug/l for waters and mg/kg for soils) indicated on Form I's? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Are soil sample results for each parameter corrected for percent solids? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Are all "less than IDL" values properly coded with "U"? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
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		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	Are the correct concentration qualifiers used with final data?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If no for any of the above, prepare Telephone Record Log, and contact laboratory for corrected data.			
A.1.9.3	Are EPA sample # s and corresponding laboratory sample ID # s the same as on the Cover Page, Form I's and in the raw data?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Was a brief physical description of samples given on Form I's?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Was the dilution of any sample diluted beyond the requirements of the contract noted on Form I or Form XIV?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If no for any of the above, note under Contract-Problem/Non-Compliance of the "Data Assessment Narrative".			
A.1.10	<u>Calibration</u>			
A.1.10.1	Is record of at least 2 point calibration present for ICP analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is record of 5 point calibration present for Hg analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is record of 4 point calibration present for:			
	Flame AA?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Furnace AA?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Cyanides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>ACTION:</u> If no for any of the above, write in the Contract Problem/Non-Compliance section of the "Data Assessment Narrative".			

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
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	YES	NO	N/A
A.1.10.2 Is correlation coefficient less than 0.995 for:			
Mercury Analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cyanide Analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Atomic Absorption Analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ACTION: If yes, flag the associated data as estimated.

NOTE: The data validator shall calculate the correlation coefficient using concentrations of the standards and the corresponding instrument response (e.g. absorbance, peak area, peak height, etc.).

A.1.10.3	In the instance where less than 4 standards are measured in absorbance (or peak area, peak height, etc.) mode, are the remaining standards analyzed in concentration mode immediately after calibration within $\pm 10\%$ of the true values?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
----------	---	--------------------------	--------------------------	-------------------------------------

ACTION: If no, flag the associated data as estimated if standards are not within $\pm 10\%$ of true values. Do not flag the data as estimated in linear range indicated by good recovery of standard(s).

A.1.11 Form II A (Initial and Continuing Calibration Verification)-

A.1.11.1	Present and complete for every metal and cyanide?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Present and complete for AA and ICP when both are used for the same analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ACTION: If no for any of the above, prepare Telephone Record Log and contact laboratory.

A.1.11.2 Circle on each Form IIA all percent recoveries that are outside the contract windows. Are all calibration standards (initial and continuing) within control limits:

Metals- 90-110%R?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hg - 80-120%R?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyanides- 85-115%R?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

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	<u>YES</u>	<u>NO</u>	<u>N/A</u>
<u>ACTION:</u> Flag as estimated (J) all positive data (not flagged with a "U") analyzed between a calibration standard with %R between 75-89% (65-79% for Hg; 70-84% for CN) or 111-125% (121-135% for Hg; 116-130% for CN) recovery and nearest good calibration standard. Qualify results <IDL as estimated (U) if the ICV or CCV %R is 75-89% (CN, 70-84% ; HG, 65-79%). Reject (red-line) as unacceptable data if recovery of the ICV or CCV is outside the range 75-125% (CN, 70-130%; Hg, 65-135%). Qualify five samples on either side of verification standard out of control limits.			
A.1.11.3 Was continuing calibration performed every 10 samples or every 2 hours?	<input checked="" type="checkbox"/>	—	—
Was ICV for cyanides distilled?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
<u>ACTION:</u> If no for any of the above, write in the Contract-Problem/Non-Compliance section of the "Data Assessment Narrative".			
A.1.12 <u>Form II B (CRDL Standards for AA and ICP) -</u>			
A.1.12.1 Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (<u>except Hg</u>)?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
Was a mid-range calib. verification standard distilled and analyzed for cyanide analysis?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run? (Note: CRI for AL, Ba, Ca, Fe, Mg, Na, or K is not required.)	<input checked="" type="checkbox"/>	—	—
<u>ACTION:</u> If no for any of the above, flag as estimated all data falling within the affected ranges. The affected ranges are: AA Analysis - **True Value \pm CRDL ICP Analysis - **True Value \pm 2CRDL CN Analysis - **True Value \pm 0.5 x True Value.			

**True value of CRA, CRI or mid-range standard. Substitute IDL for CRDL when IDL > CRDL.
Compute the concentration of the missing mid-range standard from the calibration range.

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	YES	NO	N/A
A.1.12.2 Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACTION: If no, write in Contract Problem/Non-Compliance Section of the "Data Assessment Narrative".

A.1.12.3 Circle on each Form IIB all the percent recoveries that are outside the acceptance windows.

Are CRA and CRI standards within control limits:

Metals	80 - 120%R?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Is mid-range standard within control limits:

Cyanide	80 - 120%R?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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ACTION: Flag as estimated all sample results within the affected range if the recovery of the standard is between 50-79%; flag only positive data within the affected range if the recovery is between 121-150%; reject all data within the affected range if the recovery is less than 50%; reject only positive data within the affected range if the recovery is greater than 150%. Qualify 50% of the samples on either side of CRI standard outside the control limits.

Note: Flag or reject the final results only when sample raw data are within the affected ranges and the CRDL standards are outside the acceptance windows.

A.1.13 Form III (Initial and Continuing Calibration Blanks)

A.1.13.1 Present and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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For both AA and ICP when both are used for the same analyte?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Was an initial calibration blank analyzed?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	<u>ACTION:</u> If no, prepare Telephone Record Log, contact laboratory and write in the Contract-Problems/Non-Compliance section of the "Data Assessment Narrative".			
A.1.13.2	Circle on each Form III all calibration blank values that are above CRDL (or 2 x IDL when IDL > CRDL).			
	Are all calibration blanks (when IDL < CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	<input checked="" type="checkbox"/>	—	—
	Are all calibration blanks less than two times Instrument Detection Limit (when IDL > CEDL)?	<input checked="" type="checkbox"/>	—	—
	<u>ACTION:</u> If no for any of the above, flag as estimated (J) positive sample results when <u>raw sample value</u> is less than or equal to calibration blank value analyzed between calibration blank with value over CRDL (or 2xIDL) and nearest good calibration blank. Flag five samples on either side of the calibration blank outside the control limits.			
A.1.14	<u>FORM III (Preparation Blank) -</u> (Note: The preparation blank for mercury is the same as the calibration blank.)			
A.1.14.1	Was one prep. blank analyzed for:			
	each Sample Delivery Group (SDG)?	<input checked="" type="checkbox"/>	—	—
	each batch of digested samples?	<input checked="" type="checkbox"/>	—	—
	each matrix type?	<input checked="" type="checkbox"/>	—	—
	both AA and ICP when both are used for the same analyte?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
	<u>ACTION:</u> If no for any of the above, flag as estimated (J) all the associated positive data < 10 x IDLs for which prep. blank was not analyzed.			
	<u>NOTE:</u> If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			

STANDARD OPERATING PROCEDURE

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		YES	NO	N/A
A.1.14.2	Is concentration of prep. blank value greater than the CRDL when IDL is less than or equal to CRDL?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If yes, reject (red-line) all associated data greater than CRDL concentration but less than ten times the prep. blank value.			
A.1.14.3	Is concentration of prep. blank value (Form III) less than two times IDL, when IDL is greater than CRDL?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If no, reject (red-line) all positive sample results when sample raw data are less than 10 times the prep. blank value.			
A.1.14.4	Is concentration of prep. blank below the negative CRDL?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If yes, reject (red-line) all associated sample results less than 10xCRDL.			
A.1.15	<u>Form IV (ICP Interference Check Sample)</u>			
A.1.15.1	Present and complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(NOTE: Not required for furnace AA, flame AA, mercury, cyanide and Ca, Mg, K and Na.)			
	Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<u>ACTION:</u> If no, flag as estimated (J) all the samples for which Al, Ca, Fe, or Mg is higher than in ICS.			
A.1.15.2	Circle all values on each Form IV that are more than $\pm 20\%$ of true or established mean value.			
	Are all Interference Check Sample results inside the control limits ($\pm 20\%$)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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		YES	NO	N/A
	ACTION: If no, flag as estimated (J) those positive results for which ICS recovery is between 121-150%; flag all sample results as estimated if ICS recovery falls within 50-79%; reject (red-line) those sample results for which ICS recovery is less than 50%; if ICS recovery is above 150%, reject positive results only (not flagged with a "U").			
A.1.16	<u>Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)-</u> (Note: Not required for Ga, Mg, K, and Na (both matrices), Al, and Fe (soil only.)			
A.1.16.1	Present and complete for: each SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each matrix type?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each conc. range (i.e. low, med., high)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	For both AA and ICP when both are used for the same analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ACTION: If no for any of the above, flag as estimated (J) all the positive data less than four times the spiking levels specified in SCW for which spiked sample was not analyzed.			
	NOTE: If one spiked sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
A.1.16.2	Was field blank used for spiked sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ACTION: If yes, flag all positive data less than 4 x spike added as estimated (J) for which field blank was used as spiked sample.			
A.1.16.3	Circle on each Form VA all spike recoveries that are outside control limits (75% to 125%).			
	Are all recoveries within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If no, is sample concentration greater than or equal to four times spike concentration?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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YES NO N/A

ACTION: If yes, disregard spike recoveries for analytes whose concentrations are greater than or equal to four times spike added. If no, circle those analytes on Form V for which sample concentration is less than four times the spike concentration.

Are results outside the control limits (75-125%)
flagged with "N" on Form I's and Form VA? ☒ ☐ ☐

ACTION: If no, write in the Contract - Problem/Non -
Compliance section of "Data Assessment Narrative".

A.1.16.4 Aqueous

Are any spike recoveries:

(a) less than 30%?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) between 30-74%?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) between 126-150%?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) greater than 150%?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACTION: If less than 30%, reject all associated aqueous data; if between 30-74%, flag all associated aqueous data as estimated (J); if between 126-150%, flag as estimated (J) all associated aqueous data not flagged with a "U"; if greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U".

A.1.16.5 Soil/Sediment

Are any spike recoveries:

(a) less than 10%?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) between 10-74%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) between 126-200%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) greater than 200%?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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		<u>YES</u>	<u>NO</u>	<u>N/A</u>
<u>ACTION:</u>	If less than 10%, reject all associated data; if between 10-74%, flag all associated data as estimated; if between 126-200%, flag as estimated all associated data was not flagged with a "U"; if greater than 200%, reject all associated data not flagged with a "U".			
A.1.17	<u>Form VI (Iab Duplicates)</u>			
A.1.17.1	Present and complete for:			
	each SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each matrix type?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each concentration range (i.e. low, med., high)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	both AA and ICP when both are used for the same analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>ACTION:</u>	If no for any the above, flag as estimated (J) all the data \geq CRDL* for which duplicate sample was not analyzed.			
<u>Note:</u>	1. If one duplicate sample was analyzed for more than 20 samples, then first 20 samples do not have to be flagged as estimated.			
	2. If percent solids for soil sample and its duplicate differ by more than 1%, prepare a Form VI for each duplicate pair, report concentrations in ug/L on wet weight basis and calculate RPD or Difference for each analyte.			
A.1.17.2	Was field blank used for duplicate analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>ACTION:</u>	If yes, flag all data \geq CRDL* as estimated (J) for which field blank was used as duplicate.			
A.1.17.3	Are all values within control limits (RPD 20% or difference \leq \pm CRDL)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If no, are all results outside the control limits flagged with an * on Form I's and VI?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>ACTION:</u>	If no, write in the Contract - Problems/Non-Compliance section of "Data Assessment Narrative".			

* Substitute IDL for CRDL when IDL > CRDL.

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- NOTE: 1. RID is not calculable for an analyte of the sample - duplicate pair when both values are less than IDL.
2. If the result of lab duplicate analyzed by GFAA is rejectable due to coefficient of correlation of MSA, analytical spike recovery, or duplicate injections criteria, do not apply precision criteria to metals analyzed by GEAA.

YESNON/A

A.1.17.4 Aqueous

Circle on each Form VI all values that are:

RID > 50%, or
Difference > CRDL*

Is any RID greater than 50% where sample and duplicate are both greater than or equal to 5 times *CRDL?

☒

Is any difference** between sample and duplicate greater than *CRDL where sample and/or duplicate is less than 5 times *CRDL?

☒

ACTION: If yes, flag the associated data as estimated.

A.1.17.5 Soil/Sediment

Circle on each Form VI all values that are:

RID > 100%, or
Difference > 2 x CRDL*

Is any RID (where sample and duplicate are both greater than or equal to 5 times *CRDL) :

> 100%?

☒

Is any **difference between sample and duplicate (where sample and/or duplicate is less than 5x*CRDL) :

> 2x*CRDL?

☒

* Substitute IDL for CRDL when IDL > CRDL.

** Use absolute values of sample and duplicate to calculate the difference.

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YES ND N/A

ACTION: If yes, flag the associated data as estimated.

A.1.18 Field Duplicates

A.1.18.1 Were field duplicates analyzed? ☒ ☐ ☐

ACTION: If yes, prepare a Form VI for each aqueous field duplicate pair. Prepare a Form VI for each soil duplicate pair, if percent solids for sample and its duplicate differ by more than 1%; report concentrations of soils in ug/l on wet weight basis and calculate RFDs or Difference for each analyte.

NOTE: 1. Do not calculate RFD when both values are less than IDL.
2. Flag all associated data only for field duplicate pair.

A.1.18.2 Aqueous

Circle all values on self prepared Form VI for field duplicates that are:

RFD > 50%, or
Difference > CRDL*

Is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times *CRDL? ☐ ☒ ☐

Is any **difference between sample and duplicate greater than *CRDL where sample and/or duplicate is less than 5 times *CRDL? ☐ ☒ ☐

ACTION: If yes, flag the associated data as estimated.

* Substitute IDL for CRDL when IDL > CRDL.

** Use absolute values of sample and duplicate to calculate the difference.

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	YES	NO	N/A
A.1.18.3 <u>Soil/Sediment</u>			

Circle all values on self prepared Form VI for
field duplicates that are:

RFD >100%, or

Difference > 2 x CRDL*

Is any RFD (where sample and duplicate are both
greater than 5 times *CRDL) :

>100%?

☐ ☒ ☐

Is any **difference between sample and duplicate
(where sample and/or duplicate is less than 5x *CRDL) :

>2x *CRDL?

☐ ☒ ☐

ACTION: If yes, flag the associated data as estimated.

A.1.19 Form VII (Laboratory Control Sample) (Note: LCS - not
required for aqueous Hg and cyanide analyses.)

A.1.19.1 Was one LCS prepared and analyzed for:

each SDG?

☒ ☐ ☐

each batch samples digested/distilled?

☒ ☐ ☐

both AA and ICP when both are used for the same
analyte?

☐ ☐ ☒

ACTION: If no for any of the above, prepare Telephone
Record Log and contact laboratory for submittal
of results of LCS. Flag as estimated (J) all
the data for which LCS was not analyzed.

NOTE: If only one LCS was analyzed for more than 20
samples, then first 20 samples close to LCS
do not have to be flagged as estimated.

* Substitute IDL for CRDL when EDL > CRDL.

** Use absolute values of sample and duplicate to calculate the difference.

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		YES	NO	N/A
A.1.19.2	<u>Aqueous LCS</u>			
	Circle on each Form VII the ICS percent recoveries outside control limits (80 - 120%) except for aqueous Ag and Sb.			
	Is any LCS recovery:			
	less than 50%?	—	<input checked="" type="checkbox"/>	—
	between 50% and 79%?	—	<input checked="" type="checkbox"/>	—
	between 121% and 150%?	—	<input checked="" type="checkbox"/>	—
	greater than 150%?	—	<input checked="" type="checkbox"/>	—
	<u>ACTION:</u> Less than 50%, reject (red-line) all data; between 50% and 79%, flag all associated data as estimated (J); between 121% and 150%, flag all positive (not flagged with a "U") results as estimated; greater than 150%, reject all positive results.			
A.1.19.3	<u>Solid LCS</u>			
	<u>NOTE:</u> 1. If "Found" value of LCS is rejectable due to duplicate injections or <u>analytical</u> spike recovery criteria, regardless of LCS recovery, flag the associated data as estimated (J). 2. If IDL of an analyte is equal to or greater than true value of LCS, disregard the "Action" below even though LCS is out of control limits.			
	Is LCS "Found" value higher than the control limits on Form VII?	—	<input checked="" type="checkbox"/>	—
	<u>ACTION:</u> If yes, qualify all associated positive data as estimated.			
	Is LCS "Found" value lower than the Control limits on Form VII?	—	<input checked="" type="checkbox"/>	—
	<u>ACTION:</u> If yes, qualify all associated data as estimated.			

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		YES	NO	N/A
A.1.20	<u>Form IX (ICP Serial Dilution) -</u>			
	NOTE: Serial dilution analysis is required only for initial concentrations equal to or greater than 10 x IDL.			
A.1.20.1	Was Serial Dilution analysis performed for:			
	each SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each matrix type?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	each concentration range (i.e. low, med.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	ACTION: If no for any of the above, flag as estimated all the positive data $\geq 10 \times \text{IDL}$ or $\geq \text{CRDL}$ when $10 \times \text{IDL} \leq \text{CRDL}$ for which Serial Dilution Analysis was not performed.			
A.1.20.2	Was field blank(s) used for Serial Dilution Analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ACTION: If yes, flag all associated data $\geq 10 \times \text{IDL}$ as estimated (J). If $10 \times \text{IDL} \leq \text{CRDL}$, flag all data $\geq \text{CRDL}$.			
A.1.20.3	Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ACTION: If no, write in the Contract-Problem/Non-Compliance section of the "Data Assessment Narrative".			
A.1.20.4	Circle on each Form IX all percent difference that are outside the control limits for initial concentrations equal to or greater than 10 x IDLs only.			
	Are any % difference values:			
	> 10%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	$\geq 100\%$?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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		<u>YES</u>	<u>NO</u>	<u>N/A</u>
	<u>ACTION:</u> Flag as estimated (J) all the associated sample data $\geq 10 \times \text{IDLs}$ (or $\geq \text{CRDL}$ when $10 \times \text{IDL} \leq \text{CRDL}$) for which percent difference is greater than 10% but less than 100%. Reject (red-line) all the associated sample results equal to or greater than $10 \times \text{IDLs}$ (or $\geq \text{CRDL}$ when $10 \times \text{IDL} \leq \text{CRDL}$) for which FD is greater than or equal to 100%.			
	<u>Note:</u> Flag or reject on Form I's only the sample results whose associated raw data are $\geq 10 \times \text{IDL}$ (or $\geq \text{CRDL}$ when $10 \times \text{IDL} \leq \text{CRDL}$)			
A.1.21	<u>Furnace Atomic Absorbance (AA) QC Analysis</u>			
A.1.21.1	Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GEAA?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>ACTION:</u> If no, <u>reject</u> the data on Form I's for which duplicate injections were not performed.			
A.1.21.2	Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or Coefficient of Variation (CV) for concentration greater than CRDL?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Was a dilution analyzed for sample with analytical spike recovery less than 40%?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>ACTION:</u> If no for any of the above, flag all the associated data as estimated.			
A.1.21.3	Is *analytical spike recovery outside the control limits (85-115%) for any sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>ACTION:</u> If yes, flag as estimated the affected sample results if the recovery is between 10-84%; if the recovery is between 115-200%, flag the associated positive sample results as estimated; reject the associated sample results if the recovery is less than 10%; reject positive sample results if the recovery is greater than 200%.			

* Analytical spike is not required on the pre-digestion spiked sample.

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		YES	NO	N/A
<p>NOTE: Reject or flag the data only when the affected sample(s) was not subsequently analyzed by Method of Standard Addition.</p>				
A.1.22	<u>Form VIII (Method of Standard Addition Results)</u>			
A.1.22.1	Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If no, is any Form I result coded with "S" or a "+"?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<p>ACTION: If yes, write request on Telephone Record Log and contact laboratory for submittal of Form VIII.</p>			
A.1.22.2	Is coefficient of correlation for MSA less than 0.990 for any sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<p>ACTION: If yes, reject (red-line) the affected data.</p>			
A.1.22.3	Was *MSA required for any sample but not performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is coefficient of correlation for MSA less than 0.995?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<p>ACTION: If yes for any of the above, flag all the associated data as estimated (J).</p>			
A.1.22.4	Was proper quantitation procedure followed correctly as outlined in the SCW on page E-23?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<p>ACTION: If no, note exception under Contract Problem/Non-Compliance section of the "Data Assessment Narrative", and prepare a separate list.</p>			

* MSA is not required on LCS and prep. blank.

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	YES	NO	N/A
A.1.23	<u>Dissolved/Total or Inorganic/Total Analytes -</u>		
A.1.23.1	Were any analyses performed for dissolved as well as total analytes on the same sample(s). <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
	Were any analyses performed for inorganic as well as total (organic + inorganic) analytes on the same sample(s)? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
NOTE: 1. If yes, prepare a list comparing differences between all dissolved (or inorganic) and total analytes. Compute the differences as a percent of the total analyte only when dissolved concentration is greater than CRDL as well as total concentration. 2. Apply the following questions only if inorganic (or dissolved) results are (i) above CRDL, and (ii) greater than total constituents. 3. At least one preparation blank, ICS, and LCS should be analyzed in each analytical run.			
A.1.23.2	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 10%? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
A.1.23.3	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 50%? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
ACTION: If more than 10%, flag both dissolved (or inorganic) and total values as estimated (J); if more than 50%, reject (red-line) the data for both values.			
A.1.24	<u>Form I (Field Blank) -</u>		
(Note: Designate "Field Blank" as such on Form I.)			
A.1.24.1	Circle all field blank values on Form I that are greater than CRDL, (or 2 x IDL when IDL > CRDL). Is field blank concentration less than CRDL (or 2 x IDL when IDL > CRDL) for all parameters of associated aqueous and soil samples? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
Revision: 11

If no, was field blank value already rejected
due to other QC criteria?

YES	NO	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ACTION: If no, reject (except field blank results)
all associated positive sample data less
than or equal to five times the field blank
value. Reject on Form I's the soil sample
results that when converted to ug/L on wet
basis are less than or equal to five times
the field blank value in ug/L.

A.1.25 Form X, XI, XII (Verification of Instrumental Parameters).

A.1.25.1 Is verification report present for:

Instrument Detection Limits (quarterly)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ICP Interelement Correction Factors (annually)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ICP Linear Ranges (quarterly)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ACTION: If no, contact TPO of the lab.

A.1.25.2 Form X (Instrument Detection Limits) - (Note: IDL is not
required for Cyanide.)

A.1.25.2.1 Are IDLs present for: all the analytes?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

all the instruments used?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

For both AA and ICP when both are used for the same
analyte?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

ACTION: If no for any of the above, prepare
Telephone Record Log and contact
laboratory.

A.1.25.2.2 Is IDL greater than CRDL for any analyte?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

If yes, is the concentration on Form I of the sample
analyzed on the instrument whose IDL exceeds CRDL,
greater than 5 x IDL.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Title: Evaluation of Metals Data for the
Contract Laboratory Program
Appendix A.1: Data Assessment - Contract
Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
Revision: 11

YES NO N/A

Action : If no, flag as estimated all values less
than five times IDL of the instrument whose
IDL exceeds CRDL.

A.1.25.3 Form XI (Linear Ranges)

A.1.25.3.1 Was any sample result higher than high linear range
of ICP.

— ☒ —

Was any sample result higher than the highest
calibration standard for non-ICP parameters?

— ☒ —

If yes for any of the above, was the
sample diluted to obtain the result on Form I?

☐ — ☒

ACTION: If no, flag the result reported on Form I
as estimated(J).

A.1.26 Percent Solids of Sediments

A.1.26.1 Are percent solids in sediment(s):

< 50%

☒ ☐ —

< 10%

— ☒ —

ACTION: If yes, qualify as estimated all the
results of a sample that has per cent
solids between 10%-50% (i.e. moisture
content between 50%-90%). Reject all
the results of a sample that has per cent
solids less than 10% (i.e. moisture content
greater than 90%).

NOTE: Reject or flag(J) only the sample results
that were not previously rejected or flagged
due to other QC criteria.



RECEIVED
JUL 14 1994

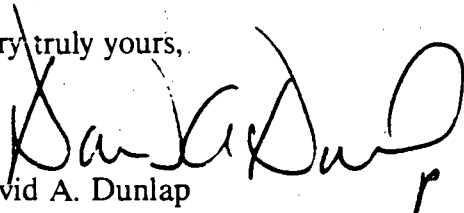
July 13, 1994

USEPA National Enforcement
Investigations Center (NEIC)
Denver Federal Center
Building 53
P. O. Box 25227
Denver, CO 80225

Attn: CLP Audit Program

Please be aware, the CSF for Case No. 22276, SDG Nos. MBLF01 and MBLF28, was sent to Richard Spear, Region 4, on July 13, 1994 via Federal Express overnight shipment.

Very truly yours,


David A. Dunlap
Project Manager

DAD:kam

cc: USEPA Contract Laboratory Program - SMO

Regional Office
5103 Old William Penn Highway • Export, Pennsylvania 15632 • 412-731-8806

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CASE NARRATIVE

000001

RECEIVED
JUL 14 1994

Laboratory Name: ITAS Pittsburgh, Pennsylvania
Laboratory Code: ITPA
Project Name: USEPA/CLP
Inorganic SOW: ILM02.1
Project Number: 662004
Work Order Number: Q406113
Contract Number: 68-D2-0044
Case Number: 22276
SDG Number: MBLF01

Sample Number:

MBLF01
MBLF25
MBLF26

MBLF27
MBLF32
MBLF33

MBLF34
MBLF38
MBLF81

MBLF82
MBLF83

Shipment

Eleven soil samples were received at the ITAS Pittsburgh Laboratory on June 9, 1994, for metals analysis.

Metals

A duplicate digestion and a matrix spike were performed on sample MBLF83. A serial dilution was performed on sample MBLF01.

The matrix spike recovery exceeded the 75 to 125 percent control limit for antimony and copper. All associated results were flagged with an "N" qualifier.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

000002

RECEIVED

JUL 14 1994

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

SOW No.: ILM02.1

EPA Sample No.

MBLF01
MBLF25
MBLF26
MBLF27
MBLF32
MBLF33
MBLF34
MBLF38
MBLF81
MBLF82
MBLF83
MBLF83D
MBLF88S

Lab Sample ID

MBLF01
MBLF25
MBLF26
MBLF27
MBLF32
MBLF33
MBLF34
MBLF38
MBLF81
MBLF82
MBLF83
MBLF83D
MBLF83S

Were ICP interelement corrections applied ?

Yes/No YES

Were ICP background corrections applied ?

Yes/No YES

If yes - were raw data generated before
application of background corrections ?

Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:

Name:

Date:

Title:

COVER PAGE - IN

ILM02.1

REVIEWED BY: AWK
DATE: 7/7/94

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INORGANIC ANALYSES DATA SHEET

000003 RECEIVED
EPA SAMPLE NO.
JUL 14 1994

MBLF01

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF01

Level (low/med): LOW Date Received: 06/09/94

% Solids: 89.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	CI	Q	M
17429-90-5	Aluminum	12500			P
17440-36-0	Antimony	2.9	U	N	P
17440-38-2	Arsenic	16.7			P
17440-39-3	Barium	138			P
17440-41-7	Beryllium	0.89	B		P
17440-43-9	Cadmium	1.0	B		P
17440-70-2	Calcium	2720			P
17440-47-3	Chromium	25.1			P
17440-48-4	Cobalt	16.6			P
17440-50-8	Copper	71.8		N	P
17439-89-6	Iron	28600			P
17439-92-1	Lead	178			P
17439-95-4	Magnesium	5840			P
17439-96-5	Manganese	914			P
17439-97-6	Mercury	2.41			CV
17440-02-0	Nickel	57.7			P
17440-09-7	Potassium	2070			P
17782-49-2	Selenium	0.65	U		P
17440-22-4	Silver	0.48	B		P
17440-23-5	Sodium	210	B		P
17440-28-0	Thallium	0.80	U		P
17440-62-2	Vanadium	205			P
17440-66-6	Zinc	176			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: STONES

1
INORGANIC ANALYSES DATA SHEET

MBLF25

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF25

Level (low/med): LOW Date Received: 06/09/94

% Solids: 87.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	M
17429-90-5	Aluminum	28800		P
17440-36-0	Antimony	25.4	N	P
17440-38-2	Arsenic	6.5		P
17440-39-3	Barium	224		P
17440-41-7	Beryllium	0.50	B	P
17440-43-9	Cadmium	33.2		P
17440-70-2	Calcium	4700		P
17440-47-3	Chromium	25.7		P
17440-48-4	Cobalt	9.2	B	P
17440-50-8	Copper	3020	N	P
17439-89-6	Iron	28400		P
17439-92-1	Lead	2200		P
17439-95-4	Magnesium	3190		P
17439-96-5	Manganese	360		P
17439-97-6	Mercury	0.47		CV
17440-02-0	Nickel	31.4		P
17440-09-7	Potassium	1320		P
17782-49-2	Selenium	1.0	B	P
17440-22-4	Silver	26.7		P
17440-23-5	Sodium	156	B	P
17440-28-0	Thallium	0.82	U	P
17440-62-2	Vanadium	30.5		P
17440-66-6	Zinc	1380		P
	Cyanide			NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL & STONES

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLF26

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF26

Level (low/med): LOW Date Received: 06/09/94

% Solids: 85.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	M
7429-90-5	Aluminum	7720		P
7440-36-0	Antimony	3.0	N	P
7440-38-2	Arsenic	3.2		P
7440-39-3	Barium	44.9	B	P
7440-41-7	Beryllium	0.38	B	P
7440-43-9	Cadmium	0.59	U	P
7440-70-2	Calcium	570	B	P
7440-47-3	Chromium	11.9		P
7440-48-4	Cobalt	5.1	B	P
7440-50-8	Copper	30.5	N	P
7439-89-6	Iron	14700		P
7439-92-1	Lead	43.2		P
7439-95-4	Magnesium	1730		P
7439-96-5	Manganese	204		P
7439-97-6	Mercury	0.12	U	CV
7440-02-0	Nickel	13.1		P
7440-09-7	Potassium	537	B	P
7782-49-2	Selenium	0.68	U	P
7440-22-4	Silver	1.1	B	P
7440-23-5	Sodium	58.6	B	P
7440-28-0	Thallium	0.84	U	P
7440-62-2	Vanadium	18.1		P
7440-66-6	Zinc	48.0		P
	Cyanide			NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL & STONES

INORGANIC ANALYSES DATA SHEET

MBLF27

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF27

Level (low/med): LOW Date Received: 06/09/94

% Solids: 87.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	IM
17429-90-5	Aluminum	29100		P
17440-36-0	Antimony	16.8	N	P
17440-35-2	Arsenic	5.2		P
17440-39-3	Barium	255		P
17440-41-7	Beryllium	0.54	B	P
17440-43-9	Cadmium	36.7		P
17440-70-2	Calcium	6590		P
17440-47-3	Chromium	24.5		P
17440-48-4	Cobalt	10	B	P
17440-50-8	Copper	1310	N	P
17439-89-6	Iron	26100		P
17439-92-1	Lead	1990		P
17439-95-4	Magnesium	4050		P
17439-96-5	Manganese	462		P
17439-97-6	Mercury	0.761		CV
17440-02-0	Nickel	31.4		P
17440-09-7	Potassium	1410		P
17782-49-2	Selenium	0.66	U	P
17440-22-4	Silver	22.9		P
17440-23-5	Sodium	160	B	P
17440-28-0	Thallium	0.81	U	P
17440-62-2	Vanadium	30.2		P
17440-66-6	Zinc	1040		P
	Cyanide			NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL & STONES

INORGANIC ANALYSES DATA SHEET

MBLF32

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF32

Level (low/med): LOW Date Received: 06/09/94

% Solids: 64.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	IM
7429-90-5	Aluminum	12800		P
7440-36-0	Antimony	6.1	N	P
7440-38-2	Arsenic	9.2		P
7440-39-3	Barium	225		P
7440-41-7	Beryllium	0.73	B	P
7440-43-9	Cadmium	14.4		P
7440-70-2	Calcium	3740		P
7440-47-3	Chromium	28.5		P
7440-48-4	Cobalt	10.9	B	P
7440-50-8	Copper	219	N	P
7439-89-6	Iron	18300		P
7439-92-1	Lead	552		P
7439-95-4	Magnesium	3190		P
7439-96-5	Manganese	539		P
7439-97-6	Mercury	0.37		CV
7440-02-0	Nickel	34.8		P
7440-09-7	Potassium	1030	B	P
7782-49-2	Selenium	1.2	B	P
7440-22-4	Silver	6.9		P
7440-23-5	Sodium	221	B	P
7440-28-0	Thallium	1.1	U	P
7440-62-2	Vanadium	35.5		P
7440-66-6	Zinc	453		P
	Cyanide			NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL & STONES

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLF33

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL

Lab Sample ID: MBLF33

Level (low/med): LOW

Date Received: 06/09/94

% Solids:

46.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
17429-90-5	Aluminum	13600			P
17440-36-0	Antimony	5.6	U	N	P
17440-38-2	Arsenic	13.8			P
17440-39-3	Barium	317			P
17440-41-7	Beryllium	1.1	B		P
17440-43-9	Cadmium	22.6			P
17440-70-2	Calcium	6060			P
17440-47-3	Chromium	39.1			P
17440-48-4	Cobalt	16.1	B		P
17440-50-8	Copper	122		N	P
17439-89-6	Iron	24600			P
17439-92-1	Lead	290			P
17439-95-4	Magnesium	4250			P
17439-96-5	Manganese	847			P
17439-97-6	Mercury	0.41			CV
17440-02-0	Nickel	38.3			P
17440-09-7	Potassium	1150	B		P
17782-49-2	Selenium	1.6	B		P
17440-22-4	Silver	4.4			P
17440-23-5	Sodium	252	B		P
17440-28-0	Thallium	1.6	U		P
17440-62-2	Vanadium	41.7			P
17440-66-6	Zinc	430			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL

000009.

EPA SAMPLE NO.

1
INORGANIC ANALYSES DATA SHEET

M6LF34

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF34

Level (low/med): LOW Date Received: 06/09/94

% Solids: 65.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
17429-90-5	Aluminum	13300			P
17440-36-0	Antimony	4.0	U	N	P
17440-38-2	Arsenic	10.4			P
17440-39-3	Barium	256			P
17440-41-7	Beryllium	0.85	B		P
17440-43-9	Cadmium	10.3			P
17440-70-2	Calcium	6380			P
17440-47-3	Chromium	38.7			P
17440-48-4	Cobalt	16.1			P
17440-50-8	Copper	91.1		N	P
17439-89-6	Iron	28600			P
17439-92-1	Lead	216			P
17439-95-4	Magnesium	4950			P
17439-96-5	Manganese	1610			P
17439-97-6	Mercury	0.73			CV
17440-02-0	Nickel	38.9			P
17440-09-7	Potassium	1450	B		P
17782-49-2	Selenium	1.6			P
17440-22-4	Silver	2.4	B		P
17440-23-5	Sodium	253	B		P
17440-28-0	Thallium	1.1	U		P
17440-62-2	Vanadium	42.6			P
17440-66-6	Zinc	350			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL & STONES

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

M6LF38

Lab Name: ITAS_PITTSBURGH Contract: 6S-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF38

Level (low/med): LOW Date Received: 06/09/94

% Solids: 50.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	IM
17429-90-5	Aluminum	16800		IP
17440-36-0	Antimony	5.1	N	IP
17440-38-2	Arsenic	24.2		IP
17440-39-3	Barium	366		IP
17440-41-7	Beryllium	1.0	B	IP
17440-43-9	Cadmium	24.6		IP
17440-70-2	Calcium	7670		IP
17440-47-3	Chromium	56.6		IP
17440-48-4	Cobalt	18.4	B	IP
17440-50-8	Copper	165	N	IP
17439-89-6	Iron	31400		IP
17439-92-1	Lead	425		IP
17439-95-4	Magnesium	6460		IP
17439-96-5	Manganese	1390		IP
17439-97-6	Mercury	0.77		CV
17440-02-0	Nickel	52.4		IP
17440-09-7	Potassium	1470	B	IP
17782-49-2	Selenium	1.9		IP
17440-22-4	Silver	6.1		IP
17440-23-5	Sodium	406	B	IP
17440-28-0	Thallium	1.4	U	IP
17440-62-2	Vanadium	85.8		IP
17440-66-6	Zinc	798		IP
	Cyanide			NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL

1
INORGANIC ANALYSES DATA SHEET

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

MBLFS1

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLFS1

Level (low/med): LOW Date Received: 06/09/94

% Solids: 70.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

GAS No.	Analyte	Concentration	Q	M
17429-90-5	Aluminum	3000		P
17440-36-0	Antimony	3.9	N	P
17440-38-2	Arsenic	15.2		P
17440-39-3	Barium	207		P
17440-41-7	Beryllium	0.29		P
17440-43-9	Cadmium	1.5		P
17440-70-2	Calcium	1520		P
17440-47-3	Chromium	12.5		P
17440-48-4	Cobalt	3.9		P
17440-50-8	Copper	62.8	N	P
17439-89-6	Iron	15900		P
17439-92-1	Lead	348		P
17439-95-4	Magnesium	584		P
17439-96-5	Manganese	63.7		P
17439-97-6	Mercury	0.98		CV
17440-02-0	Nickel	23.0		P
17440-09-7	Potassium	414		P
17782-49-2	Selenium	2.4		P
17440-22-4	Silver	6.8		P
17440-23-5	Sodium	108		P
17440-28-0	Thallium	1.0	U	P
17440-62-2	Vanadium	98.9		P
17440-66-6	Zinc	75.1		P
	Cyanide			NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL

000012

EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

MBLF82

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLF82

Level (low/med): LOW Date Received: 06/09/94

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	M
7429-90-5	Aluminum	3440		P
7440-36-0	Antimony	3.1	N	P
7440-38-2	Arsenic	25.7		P
7440-39-3	Barium	535		P
7440-41-7	Beryllium	0.42		P
7440-43-9	Cadmium	0.60		P
7440-70-2	Calcium	601		P
7440-47-3	Chromium	12.0		P
7440-48-4	Cobalt	7.8		P
7440-50-8	Copper	38.5	N	P
7439-89-6	Iron	23400		P
7439-92-1	Lead	198		P
7439-95-4	Magnesium	1230		P
7439-96-5	Manganese	224		P
7439-97-6	Mercury	0.24		CV
7440-02-0	Nickel	15.2		P
7440-09-7	Potassium	878		P
7782-49-2	Selenium	2.5		P
7440-22-4	Silver	0.89		P
7440-23-5	Sodium	161		P
7440-28-0	Thallium	0.86		P
7440-62-2	Vanadium	29.2		P
7440-66-6	Zinc	48.7		P
	Cyanide			NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLF83

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF01

Matrix (soil/water): SOIL Lab Sample ID: MBLFSS

Level (low/med): LOW Date Received: 06/09/94

% Solids: 60.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	Q	IM
17429-90-5	Aluminum	7710		P
17440-36-0	Antimony	4.5	N	P
17440-38-2	Arsenic	12.9		P
17440-39-3	Barium	290		P
17440-41-7	Beryllium	0.51	B	P
17440-43-9	Cadmium	4.7		P
17440-70-2	Calcium	6960		P
17440-47-3	Chromium	78.6		P
17440-48-4	Cobalt	15.1	B	P
17440-50-8	Copper	82.9	N	P
17439-89-6	Iron	36200		P
17439-92-1	Lead	419		P
17439-95-4	Magnesium	3220		P
17439-96-5	Manganese	523		P
17439-97-6	Mercury	2.9		CV
17440-02-0	Nickel	31.7		P
17440-09-7	Potassium	1350	B	P
17782-49-2	Selenium	1.4	B	P
17440-22-4	Silver	3.8		P
17440-23-5	Sodium	214	B	P
17440-28-0	Thallium	1.2	U	P
17440-62-2	Vanadium	56.7		P
17440-66-6	Zinc	317		P
	Cyanide			NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ORGANIC MATERIAL



July 13, 1994

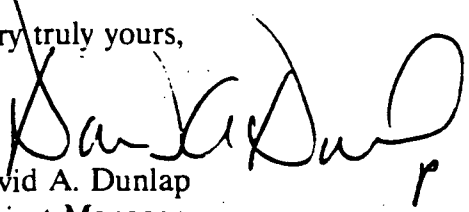
RECEIVED
JUL 14 1994

USEPA National Enforcement
Investigations Center (NEIC)
Denver Federal Center
Building 53
P. O. Box 25227
Denver, CO 80225

Attn: CLP Audit Program

Please be aware, the CSF for Case No. 22276, SDG Nos. MBLF01 and MBLF28, was sent to Richard Spear, Region 4, on July 13, 1994 via Federal Express overnight shipment.

Very truly yours,


David A. Dunlap
Project Manager

DAD:kam

cc: USEPA Contract Laboratory Program - SMO

Regional Office
5103 Old William Penn Highway • Export, Pennsylvania 15632 • 412-731-8806

IT Corporation is a wholly owned subsidiary of International Technology Corporation

July 13, 1994

INTERNATIONAL TECHNOLOGY CORPORATION

CASE NARRATIVE

004001
RECEIVED
JUL 14 1994

Laboratory Name: ITAS Pittsburgh, Pennsylvania
Laboratory Code: ITPA
Project Name: USEPA/CLP
Inorganic SOW: ILM02.1
Project Number: 662004
Work Order Number: Q406114
Contract Number: 68-D2-0044
Case Number: 22276
SDG Number: MBLF28

Sample Number:

MBLF28
MBLF29

MBLF30
MBLF31

MBLF35
MBLF36

MBLF37

Shipment

Seven water samples were received at the ITAS Pittsburgh Laboratory on June 9, 1994, for metals analysis.

Metals

A duplicate digestion and a matrix spike were performed on sample MBLF28. A serial dilution was performed on sample MBLF29.

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

SOW No.: 1LM02.1

RECEIVED
JUL 14 1994

EPA Sample No.

Lab Sample ID

MBLF28
MBLF28D
MBLF28S
MBLF29
MBLF30
MBLF31
MBLF35
MBLF36
MBLF37

MBLF28
MBLF28D
MBLF28S
MBLF29
MBLF30
MBLF31
MBLF35
MBLF36
MBLF37

Were ICP interelement corrections applied ?

Yes/No YES

Were ICP background corrections applied ?

Yes/No YES

If yes - were raw data generated before
application of background corrections ?

Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee as verified by the following signature.

Signature:

Name:

Date:

Title:

COVER PAGE - IN

1LM02.1

REVIEWED BY: mtwDATE: 7/2/94

000003

EPA SAMPLE NO.

1
INORGANIC ANALYSES DATA SHEET

MBLF28

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER Lab Sample ID: MBLF28

Level (low/med): LOW Date Received: 06/09/94

% Solids: 0.0

RECEIVED

JUL 14 1994

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	Q	IM
17429-90-5	Aluminum	2440		P
17440-36-0	Antimony	13.2	U	P
17440-38-2	Arsenic	8.2	B	P
17440-39-3	Barium	161	B	P
17440-41-7	Beryllium	0.55	B	P
17440-43-9	Cadmium	3.2	B	P
17440-70-2	Calcium	50600		P
17440-47-3	Chromium	6.4	B	P
17440-48-4	Cobalt	4.8	B	P
17440-50-6	Copper	22.6	B	P
17439-89-6	Iron	4800		P
17439-92-1	Lead	35.4		P
17439-95-4	Magnesium	10000		P
17439-96-5	Manganese	679		P
17439-97-6	Mercury	0.20	U	P
17440-02-0	Nickel	20.3	B	P
17440-09-7	Potassium	3110	B	P
17782-49-2	Selenium	3.0	U	P
17440-22-4	Silver	1.9	U	P
17440-23-5	Sodium	24800		P
17440-28-0	Thallium	3.7	U	P
17440-62-2	Vanadium	10.3	B	P
17440-66-6	Zinc	713		P
	Cyanide			NR

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

FPA SAMPLE NO.

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

MBLF29

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER

Lab Sample ID: MBLF29

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11300			P
7440-36-0	Antimony	13.2	U		P
7440-38-2	Arsenic	15.6			P J
7440-39-3	Barium	344			P
7440-41-7	Beryllium	0.91	B		P
7440-43-9	Cadmium	14.5			P J
7440-70-2	Calcium	55200			P
7440-47-3	Chromium	25.7			P
7440-48-4	Cobalt	13.1	B		P
7440-50-8	Copper	89.5			P
7439-89-6	Iron	19600			P
7439-92-1	Lead	160			P
7439-95-4	Magnesium	12600			P
7439-96-5	Manganese	1380			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.8			P
7440-09-7	Potassium	3950	B		P
7782-49-2	Selenium	3.0	U		P J
7440-22-4	Silver	3.8	B		P
7440-23-5	Sodium	24500			P
7440-28-0	Thallium	5.6	B		P
7440-62-2	Vanadium	32.4	B		P
7440-66-6	Zinc	994			P
	Cyanide				NR

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: BROWN

Clarity After: CLOUDY

Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLF30

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER

Lab Sample ID: MBLF30

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

LCAS No.	Analyte	Concentration	Q	IM
17429-90-5	Aluminum	401		IP
17440-36-0	Antimony	13.2	UI	IP
17440-38-2	Arsenic	3.9	BI	IP
17440-39-3	Barium	114	BI	IP
17440-41-7	Beryllium	0.20	BI	IP
17440-43-9	Cadmium	2.6	UI	IP
17440-70-2	Calcium	46100		IP
17440-47-3	Chromium	1.5	UI	IP
17440-48-4	Cobalt	2.6	BI	IP
17440-50-8	Copper	7.2	BI	IP
17439-89-6	Iron	1470		IP
17439-92-1	Lead	5.8		IP
17439-95-4	Magnesium	8640		IP
17439-96-5	Manganese	409		IP
17439-97-6	Mercury	0.20	UI	CV
17440-02-0	Nickel	9.3	BI	IP
17440-09-7	Potassium	2500	BI	IP
17782-49-2	Selenium	3.0	UI	IP
17440-22-4	Silver	1.9	UI	IP
17440-23-5	Sodium	24400		IP
17440-28-0	Thallium	3.7	UI	IP
17440-62-2	Vanadium	4.6	BI	IP
17440-66-6	Zinc	62.1		IP
	Cyanide			INR

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

MBLFS1

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF26

Matrix (soil/water): WATER

Lab Sample ID: MBLF31

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	CI	Q	IM
17429-90-5	Aluminum	373			P
17440-36-0	Antimony	13.2	U		P
17440-38-2	Arsenic	4.6	B		P
17440-39-3	Barium	117	B		P
17440-41-7	Beryllium	0.16	B		P
17440-43-9	Cadmium	2.6	U		P
17440-70-2	Calcium	47400			P
17440-47-3	Chromium	1.5	U		P
17440-48-4	Cobalt	2.2	B		P
17440-50-8	Copper	7.6	B		P
17439-89-6	Iron	1500			P
17439-92-1	Lead	4.6			P
17439-95-4	Magnesium	9050			P
17439-96-5	Manganese	416			P
17439-97-6	Mercury	0.20	U		CV
17440-02-0	Nickel	8.9	B		P
17440-09-7	Potassium	2580	B		P
17782-49-2	Selenium	3.0	U		P
17440-22-4	Silver	1.9	U		P
17440-23-5	Sodium	25100			P
17440-28-0	Thallium	3.7	U		P
17440-62-2	Vanadium	4.0	B		P
17440-66-6	Zinc	51.8			P
	Cyanide				NR

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: BROWN

Clarity After: CLOUDY

Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

MBLF35

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER

Lab Sample ID: MBLF35

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	Q	IM
7429-90-5	Aluminum	39.1	B	P
7440-36-0	Antimony	13.2	U	P
7440-38-2	Arsenic	2.2	U	P
7440-39-3	Barium	0.96	B	P
7440-41-7	Beryllium	0.31	B	P
7440-43-9	Cadmium	2.6	U	P
7440-70-2	Calcium	651	B	P
7440-47-3	Chromium	1.5	U	P
7440-48-4	Cobalt	1.6	B	P
7440-50-8	Copper	0.90	U	P
7439-89-6	Iron	51.2	B	P
7439-92-1	Lead	1.4	U	P
7439-95-4	Magnesium	32.1	B	P
7439-96-5	Manganese	1.0	B	P
7439-97-6	Mercury	0.20	U	CV
7440-02-0	Nickel	5.9	U	P
7440-09-7	Potassium	244	U	P
7782-49-2	Selenium	3.0	U	P
7440-22-4	Silver	1.9	U	P
7440-23-5	Sodium	967	B	P
7440-28-0	Thallium	3.7	U	P
7440-62-2	Vanadium	1.5	U	P
7440-66-6	Zinc	142		P
	Cyanide			NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

000008
EPA SAMPLE NO.

MBLF36

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER

Lab Sample ID: MBLF36

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
17429-90-5	Aluminum	103	B		P
17440-36-0	Antimony	13.2	U		P
17440-38-2	Arsenic	2.9	B		P
17440-39-3	Barium	1.1	B		P
17440-41-7	Beryllium	0.16	B		P
17440-43-9	Cadmium	2.6	U		P
17440-70-2	Calcium	996	B		P
17440-47-3	Chromium	1.5	U		P
17440-48-4	Cobalt	1.8	B		P
17440-50-8	Copper	0.90	U		P
17439-89-6	Iron	41.7	B		P
17439-92-1	Lead	1.4	U		P
17439-95-4	Magnesium	72.0	B		P
17439-96-5	Manganese	1.6	B		P
17439-97-6	Mercury	0.20	U		CV
17440-02-0	Nickel	5.9	U		P
17440-09-7	Potassium	244	U		P
17762-49-2	Selenium	3.0	U		P
17440-22-4	Silver	2.2	B		P
17440-23-5	Sodium	1100	B		P
17440-28-0	Thallium	3.7	U		P
17440-62-2	Vanadium	1.5	U		P
17440-66-6	Zinc	97.5			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

MBLF37

Lab Name: ITAS_PITTSBURGH Contract: 6S-D2-0044

Lab Code: ITPA Case No.: 22276 SAS No.: SDG No.: MBLF28

Matrix (soil/water): WATER

Lab Sample ID: MBLF37

Level (low/med): LOW

Date Received: 06/09/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

ICAS No.	Analyte	Concentration	CI	Q	IM
7429-90-5	Aluminum	5800			P
7440-36-0	Antimony	13.2	U		P
7440-38-2	Arsenic	9.2	B		P
7440-39-3	Barium	366			P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	6.2			P
7440-70-2	Calcium	38000			P
7440-47-3	Chromium	27.1			P
7440-48-4	Cobalt	8.8	B		P
7440-50-8	Copper	76.8			P
7439-89-6	Iron	9570			P
7439-92-1	Lead	153			P
7439-95-4	Magnesium	8700			P
7439-96-5	Manganese	907			P
7439-97-6	Mercury	0.23			CV
7440-02-0	Nickel	26.0	B		P
7440-09-7	Potassium	3170	B		P
7782-49-2	Selenium	3.0	U		P
7440-22-4	Silver	3.2	B		P
7440-23-5	Sodium	17900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	46.5	B		P
7440-66-6	Zinc	838			P
	Cyanide				NR

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: BROWN

Clarity After: CLOUDY

Artifacts:

Comments:

REFERENCE NO. 17

$K \pm \Sigma$
CROSS SECTION BOOK
82 0066

Cornell Dubilier
Electronics, Inc.

South Plainfield, NJ

Project No.: 8003-306

Cornell Dubilier Electronics, Inc.

South Plainfield, New Jersey

Job No.: 8003-306

Background Sediment Sampling Event

October 13, 1994

Malcolm Blumoff ①
10/13/94

1000 Arrive at site

Malcolm Finnie personnel:

A. Clibando (AC) - site manager

D. Kahlenberg (DK) - Health & Safety Officer
Sampler

Weather Conditions: Sunny, 60°F
Slight Breeze

Met with Mike from Norpak. Informed Mike that we're waiting for delivery of Analyte Free Water to the site. Expect delivery between 1000 and 1030.

1005 AC & DK go to Industrial Park entrance to await delivery

1010 DK conducts tailgate health & safety meeting.

1030 Water delivery arrived.

1035 Met with Mike again. Told him we will set up decon area & get back to him.

1040 Setting up decon area.

Malcolm Blumoff
10/13/94

② Andrew Chlanoff
10/13/1981

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Andrew Chlanoff
10/13/81

Decon Equipment Lot Nos.

Bowls & Trowels - 1AA070

Scoopulas - 1AA056

1050 Decon Area set up

1100 Going to sample location # SEDG.
Mike SanGiovanni is escorting

1115 Arrive at sample location SEDG
Photo IPI/ISI Looking south at
confluence of unnamed tributary to
Bound Brook and unnamed stream
off of Spicer Ave

1117 DK begins to collect sample no.
SEDG. SedG is approximately 30' downstream of
confluence.
Sediment is fine-grained, brown in color, and
contains significant amount of vegetative
matter. Photo IP2/IS2 - DK collecting
sediment sample no. SEDG

1127 DK finishes collecting sample no. SEDG
Heading back to decon area

Andrew C. Blumoff
10/13/94 (3)

Andrew C. Blumoff
10/13/94

Andrew Chlanoff
10/13/14

1140 Arrive at decon area. Will follow Mike S. to
sediment sample location SED7/SEDB

1145 Arrive at intersection of Belmont Ave.
with unnamed Bound Brook Tributary

Photo IP3/IS3 - View looking southeast
at Belmont Ave. Bridge over unnamed
tributary.

1146 SED7/SEDB sample location will be
approximately 50 ft downstream of
Belmont Ave Bridge.

1149 DK begins collecting sediment sample
SED7. SEDB is a duplicate sample
taken at same location as SED7

Photo IP4/ISA DK collecting
SED7/SEDB

Sediment is brown with some gray particles,
fine-grained, with vegetative matter. Very
similar to sediment type found at sample
location SEDE.

Andrew Chlanoff
10/13/14

Richard C. Blum
10/13/94 (5)

1205 DK finishes collecting sample nos. SED7 & SED8. Heading back to decon area.

1210 Arrive at decon area.

1215 Proceeding to SW2/SED2 sample location that was sampled 6/6/94. Sample location still staked out.

Sediment is brown colored & fine-grained with some vegetative matter.

Comparable to sediment samples collected today.

1225 Walked along bank of stream to sample location SW3/SW4/SED3 AC. Sample location was staked to mark location. Sediment type very comparable to all other sediments observed along the stream.

1245 DK begins collecting rinsate sample no.: RIN1 (bowl & scoopula).

Photo 1P5/155 - DK collecting RIN1

1300 DK finishes collecting rinsate sample RIN1

Richard C. Blum
10/13/94

Andrew Chikarauff
10/15/25

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Andrew Chikarauff
10/15/25

1302 DK
RI
PH

1320 DK

1321 E
W

1400 Co
for

1420 Co
S

1302 DK begins collecting rinse sample
RIN2 (trowel)

Photo 1P6/156: DK collecting RIN2

1320 DK finishes collecting RIN2

1321 Begin to pack coolers ~~for~~ AC
with samples for shipping

1400 Coolers packed. DK completing paperwork
for shipping

1420 Coolers ready to be shipped. Leaving
site

Andrew (Blond)
10/13/94
⑦

Andrew (Blond)
10/13/94

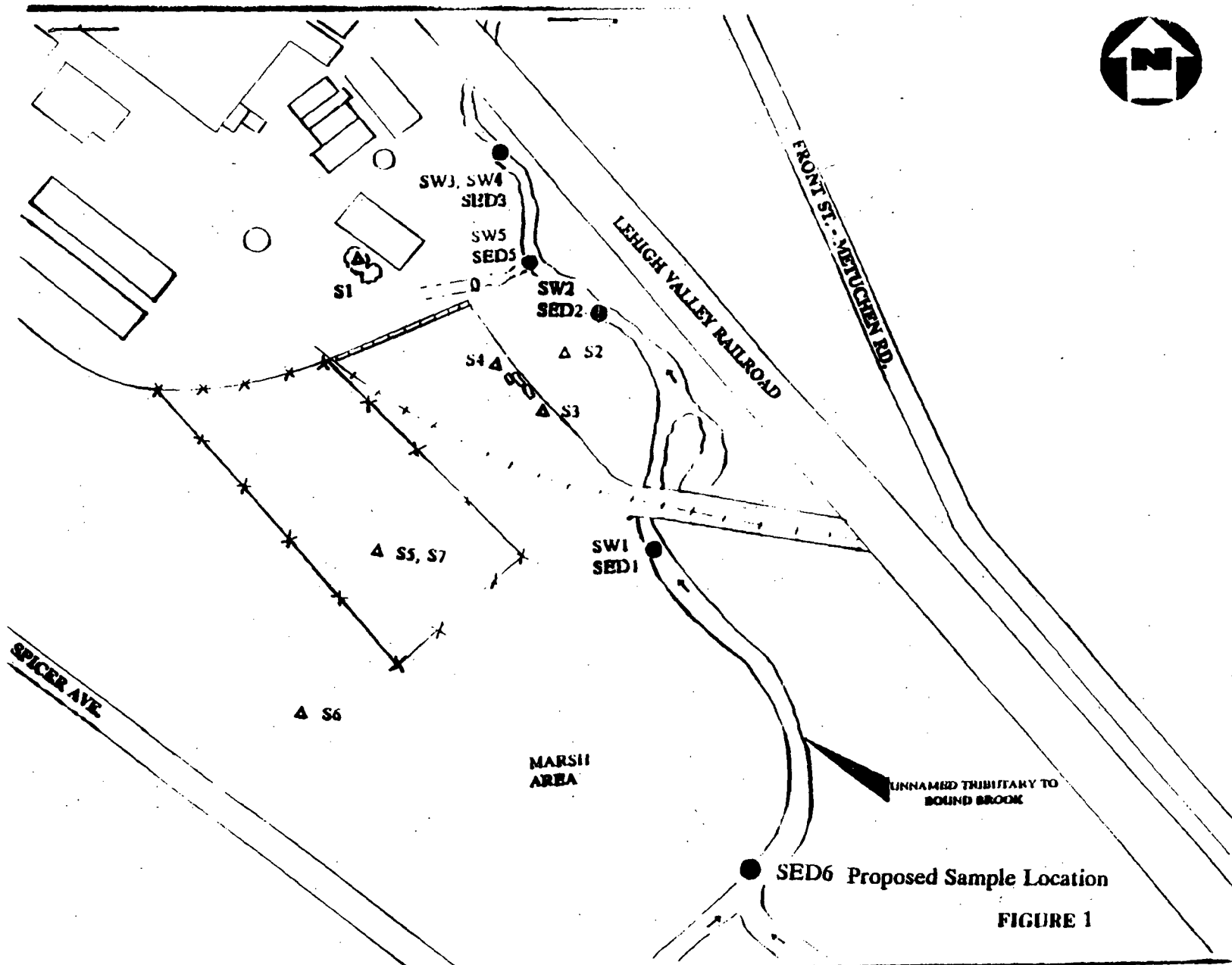
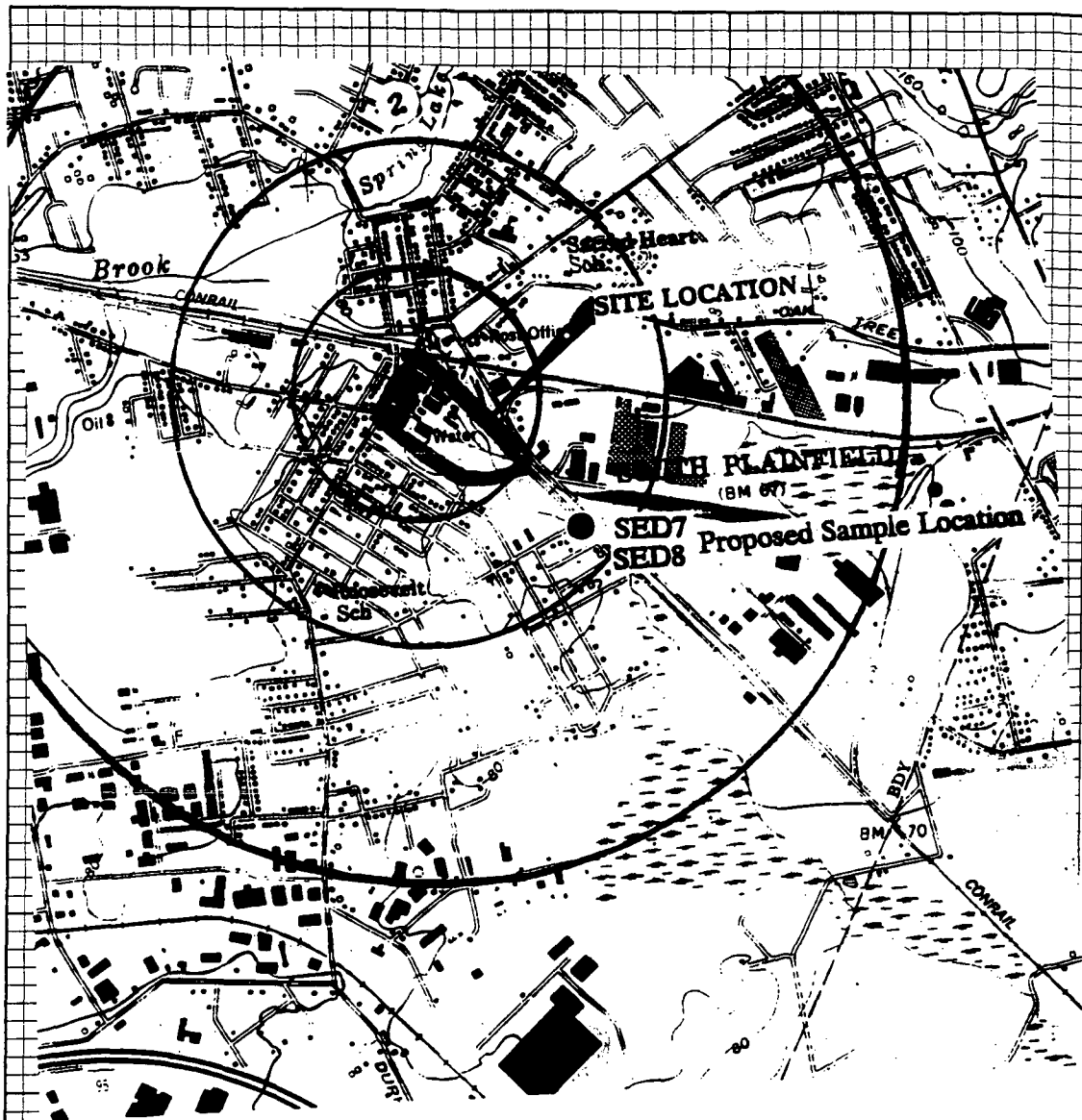


FIGURE 1



CORNELL DUBILIER ELECTRONICS
 SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
 SAMPLE LOCATION MAP
 NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

REFERENCE NO. 18

SAMPLE TRIP REPORT

SITE NAME: Cornell Dubilier Electronics Site

PROJECT No.: 8003-306

CERCLIS ID No.: NJD981557879

SAMPLING DATE: October 13, 1994

EPA CASE No.: 22774

1. Site Location: Hamilton Boulevard, South Plainfield, New Jersey - Refer to Figure 1
2. Sample Locations: Refer to Figures 2 & 3
3. Sample Descriptions: Refer to Table 1
4. Laboratories Receiving Samples:

Sample Type

Name and Address of Laboratory

Full TCL Organics

IEA, Inc. - New Jersey
628 Route 10
Whippany, NJ 07981

TAL Inorganics
(except CN)

IT Analytical Services - Export
5103 Old William Penn Highway
Export, PA 15632

5. Sample Dispatch Data:

A total of two (2) aqueous samples and three (3) sediment samples were shipped on October 13, 1994 by Malcolm Pimie, Inc. personnel, via Federal Express, in one (1) cooler, under Airbill No. 2359714206 to IEA, Inc. - New Jersey for Full TCL Organics analyses. A total of two (2) aqueous samples and three (3) sediment samples were shipped on October 13, 1994 by Malcolm Pimie inc. personnel, via Federal Express, in one (1) cooler, under Airbill No. 2359714195 to IT Analytical Services - Export for TAL Inorganics (excluding CN) analyses.

6. Sampling Personnel:

Name

Organization

Duties on Site

Andrew Clibanoff
David Kahlenberg

Malcolm Pimie, Inc.
Malcolm Pimie, Inc.

Site Manager (SM)
Site Health & Safety Officer (SHSO), Sample
Management Officer (SMO), Sampler

7. Weather Conditions:

10/13/94

Sunny; temperature, 60° F

8. Additional Comments:

All samples will be analyzed for Target Compound List (TCL) organic and Target Analyte List (TAL) inorganic compounds, excluding cyanide.

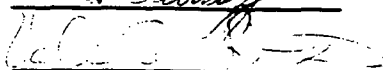
The collection time for RIN1 and RIN2 was after the collection of the sediment samples. However, the equipment used for rinsate collection was decontaminated prior to the actual sampling event and therefore can be associated with the sediment samples collected during this event.

9. Report Prepared By:



Date: October 20, 1994

10. QA/QC Approved By:



Date: October 20, 1994

TABLE 1
SAMPLE DESCRIPTIONS
CORNELL DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
SED6 ⁽¹⁾	MBLZ89	BPL49	1117	Soil	Sediment sample collected approximately 30 feet downstream of confluence of unnamed tributary to Bound Brook unnamed stream off of Splcer Road (approx. 620 feet upstream of SW1/SED1).
SED7	MBLZ90	BPL50	1149	Soil	Sediment sample collected from unnamed Bound Brook tributary approximately 50 feet downstream of Belmont Avenue Bridge (approx. 1,350 feet upstream of SW1/SED1).
SED8 ⁽²⁾	MBLZ91	BPL51	1149	Soil	Duplicate sediment sample collected at same location as sample SED7.
RIN1	MBLZ92	BPL52	1245	Aqueous	Rinsate sample collected from bowl and scoopula.
RIN2	MBLZ93	BPL53	1302	Aqueous	Rinsate sample collected from trowel.

(1) Sample location designated for the collection of MS/MSD or MS/MD sample.

(2) Sample location designated for the collection of field duplicate sample.



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBILIER ELECTRONICS	
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 5/4/84	SCALE: 1" = 2,000'
REPORT NUMBER: 8003-308	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

FIGURE 1

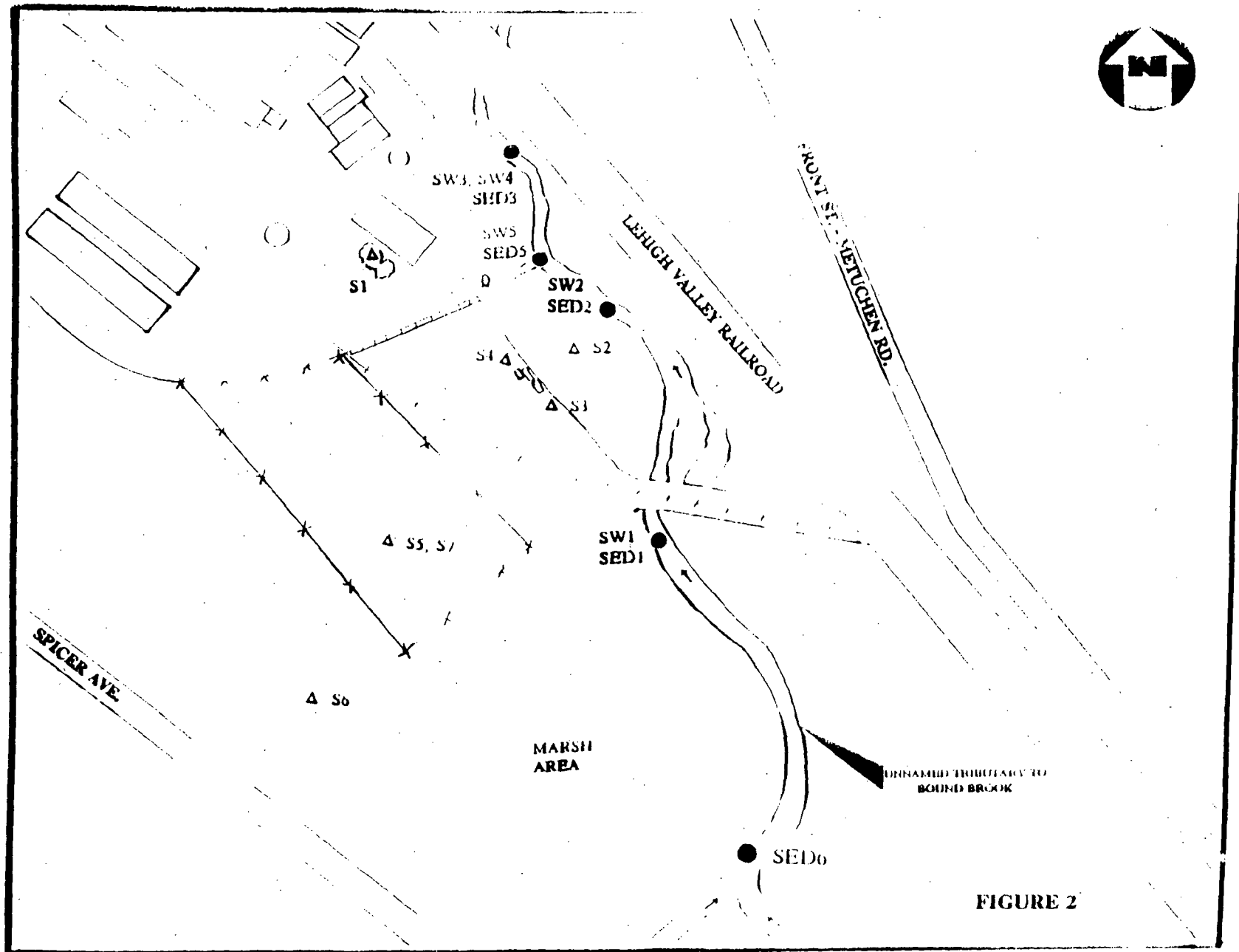


FIGURE 2

MAP KEY

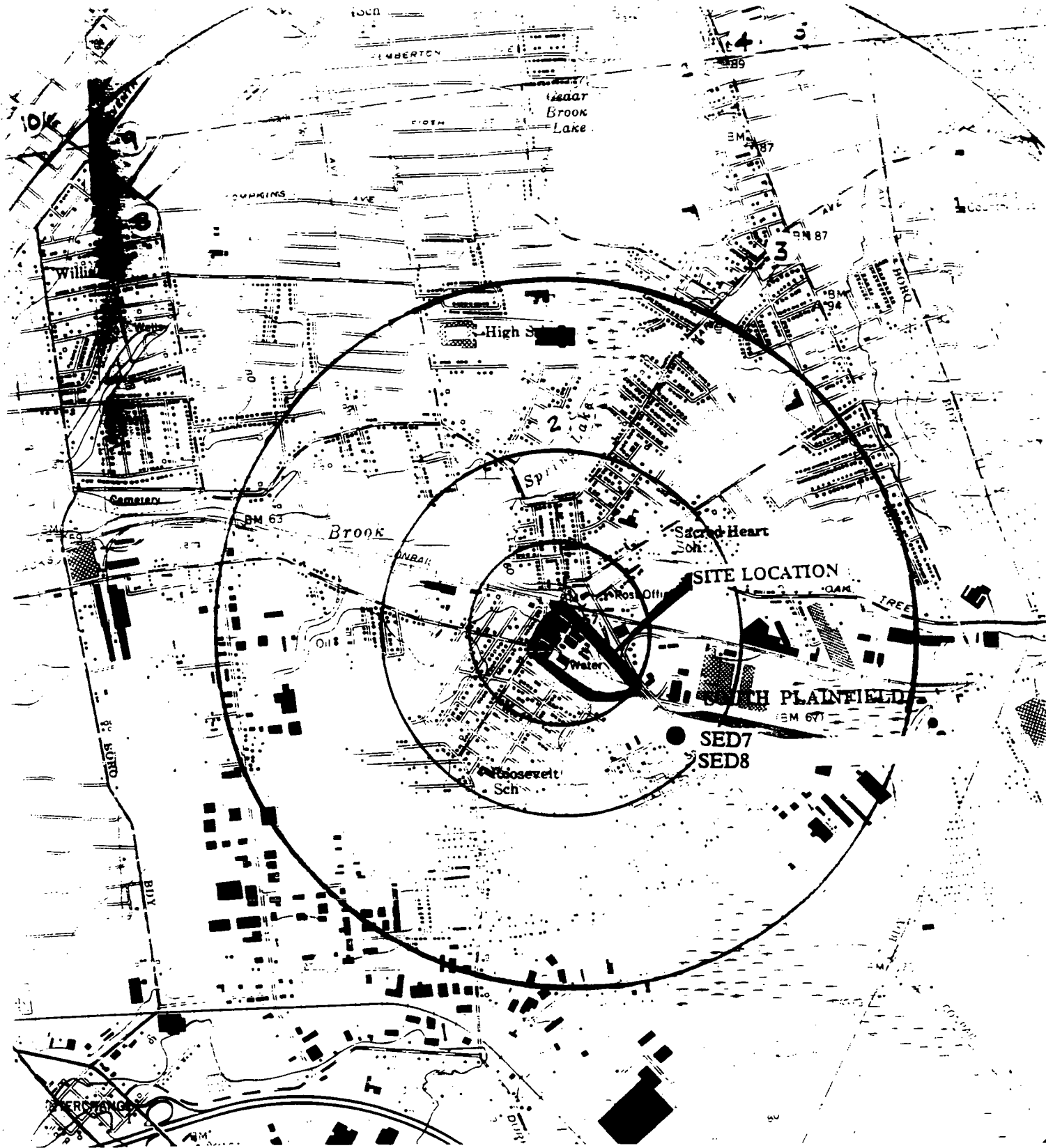
SOIL SAMPLE



SURFACE WATER / SEDIMENT SAMPLE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

FIGURE 3



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 815 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(if applicable)

Case No.

22774

1. Project Code 8003306		Account Code		2. Region No. II		Sampling Co. MPI		4. Date Shipped 10/13/94		Carrier Fed EX		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)						
Regional Information				Sampler (Name) DAVID KAHLEBERG				Airbill Number 2359714206												
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To IEA Inc. - New Jersey 628 Route 10 Whippany, NJ 07981 ATTN: Brian Wood												
Site Name Cornell-Dubilier				3. Type of Activity SF <input type="checkbox"/> PA <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RO <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SS <input checked="" type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> Remedial Removal																
City, State Plainfield, NJ		Site Spill ID 22																		
CLP Sample Numbers (from labels)		A Enter # from Box 7	B Gone Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA BNA Pest/PCB High only ARO/TOX			F Regional Specific Tracking Number or Tag Numbers		G Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials		J Corresp. CLP Inorg. Samp. No.		K Enter Appropriate Qualifier for Designated Field QC a = Blank S = Spike D = Duplicate PE = Perform Eval. - = Not a QC Sample	
BPL49		5	L	G	N	✓				03037+38	SED6	10/13/94	1117	DBK	MBL289	S/SD				
BPL49		5	L	G	N	✓	✓	✓		03039	SED6	10/13/94	1117	DBK	MBL289	S/SD				
BPL50		5	L	G	N	✓				03041+42	SED7	10/13/94	1149	DBK	MBL290					
BPL50		5	L	G	N		✓	✓		03043	SED7	10/13/94	1149	DBK	MBL290					
BPL51		5	L	G	N	✓				03045+46	SED8	10/13/94	1149	DBK	MBL291					
BPL51		5	L	G	N		✓	✓		03047	SED8	10/13/94	1149	DBK	MBL291					
BPL52		4	L	G	1	✓				03049+50	RIN1	10/13/94	1245	DBK	MBL292					
BPL52		4	L	G	N		✓	✓		03051+52	RIN1	10/13/94	1245	DBK	MBL292					
BPL53		4	L	G	1	✓				03054+55	RIN2	10/13/94	1302	DBK	MBL293					
BPL53		4	L	G	N		✓	✓		03056+57	RIN2	10/13/94	1302	DBK	MBL293					
Shipment for Case complete? (Y/N)		Page 1 of 1		Sample used for a spike and/or duplicate BPL49				Additional Sampler Signatures				Chain of Custody Seal Number								

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 10/13/94 10:05pm	Received by: (Signature) Fed EX.	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

BLM - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab

Split Samples ☐ Accepted (Signature)

☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0227716



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No.
(If applicable)

Case No.

22774

1. Project Code 8003306		Account Code		2. Region No. II		Sampling Co. MPI		4. Date Shipped 10/13/94		Carrier Fed EX		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaOH 4. H2SO4 5. K2Cr2O7 6. Ice only 7. Other (Specify) N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)					
Regional Information				Sampler (Name) DAVID KAHLENBERG				Airbill Number 2359714195											
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To IT Analytical Services-Export 5103 Old William Penn Hwy. Export, PA 15632 ATTN: David Dunlap											
Site Name Cornell-Dubiler				3. Type of Activity Remedial Removal SF <input type="checkbox"/> Lead <input type="checkbox"/> Pre Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SS <input checked="" type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>															
City, State S. Fairfield, NJ		Site Spill ID 22		D Preservative from Box 6		E - RAS Analysis Metals Total Dissolved Cyanide Nitrate/Nitrite Fluoride pH Conductivity		F Regional Specific Tracking Number or Tag Numbers		G Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials		J Corresp. CLP Org. Samp. No.		K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Portion Eval. -- = Not a QC Sample	
CLP Sample Numbers (from labels)		A Enter # from Box 7		B Conc. Low Med High		C Sample Type: Comp./Grab													
MBL289		5		L		G		N		03040		SED6		10/13/94 1117		DSK		BPL49	
MBL290		5		L		G		N		03044		SED7		10/13/94 1149		DSK		BPL50	
MBL291		5		L		G		N		03048		SED8		10/13/94 1149		DSK		BPL51	
MBL292		4		L		G		2		03053		RIN1		10/13/94 1245		DSK		BPL52	
MBL293		4		L		G		2		03058		RIN2		10/13/94 1302		DSK		BPL53	
Shipment for Case complete? (Y/N)		Page 1 of 1		Sample used for a spike and/or duplicate		Additional Sampler Signatures		Chain of Custody Seal Number											
Y				MBL289															

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 10/13/94 1407	Received by: (Signature) Fed EX	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:

Green - Region Copy Pink - SMO Copy White - Lab Copy for return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

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